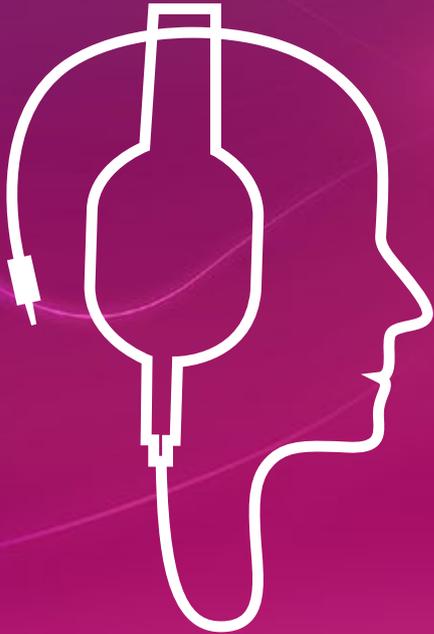




# ABSTRACT BOOK



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## TABLE OF CONTENT

### ABSTRACT FREE PAPER

GLA	3
NO	22
IIM	30
KBR	44
OFKOM	58
VR	75
POS	89
REF	100
ROO	103

### ABSTRACT E-POSTER

E-pos GLA	105
E-Pos NO	128
E-Pos IIM	156
E-Pos KBR	194
E-Pos OFKOM	218
E-Pos VR	220
E-Pos POS	243
E-Pos REF	260
E-Pos ROO	271

## ABSTRACT FREE PAPER

### FP-GLA-01

#### Association of statin use with risk of developing open-angle glaucoma

##### *Abstract Title*

Association of statin use with risk of developing open-angle glaucoma

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##### *Abstract Type*

Research

##### *Introduction & Objective*

Open-angle glaucoma (OAG) is a progressive neurodegenerative disease that leads to glaucomatous optic neuropathy and is the leading cause of irreversible blindness worldwide. Statins are inhibitors of 3-Hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase, a class of cholesterol-lowering medication prescribed for prevention and treatment of cardiovascular disease. The pleiotropic properties of statins such as antioxidant, immunomodulation, and effects on the nitric oxide synthase system has been proposed to protect retinal ganglion cells (RGC) against glaucomatous damage. We performed a systematic review to summarize the evidence to address the conflicting results of the association of statin use with OAG.

##### *Method*

The systematic review was done by searching the following electronic database from 2010 to 2019: PubMed, MEDLINE, and Cochrane Library. Studies in English with human participants were included. Review articles were excluded.

##### *Result*

We identified four cohort studies and one case control study with a total number of 691.346 participants. No randomized control trials were retrieved. There was inconsistent evidence regarding the protective effect of statins against the incidence of OAG. One study shows that high dose of statins may increase the risk of OAG (p

##### *Conclusion*

Statin use with a minimal duration of 2 years was associated with a significant reduction in the risk of developing OAG. Further research is needed to determine the duration and dose used to obtain a protective effect.

##### *Keyword*

statin, open-angle glaucoma

##### *Category*

Free Paper Presentation

##### *Latest Update*

July 21, 2020

##### *Status*

Submitted

## FP-GLA-02

### The relationship between caffeine intake and intraocular pressure in Asia Pacific: a systematic review

#### Abstract Title

The relationship between caffeine intake and intraocular pressure in Asia Pacific: a systematic review

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#### Abstract Type

Research

#### Introduction & Objective

Glaucoma is a progressive optic neuropathy that leads to blindness. Asia Pacific accounted for approximately 60% of the disease and the number will increase to 74% in 2040. The highest prevalence is among Chinese and Japanese.

Controlling modifiable factors also has its role in maintaining the intraocular pressure (IOP), especially diet, such as reducing caffeine intake which is regularly consumed. The controversial effects of caffeine and IOP are still questionable, thus we conducted a systematic review to summarize the conflicting result of the association.

#### Method

This study was conducted from Pubmed, MedLink, and Cochrane between 2002 and 2019. Studies in English and human subjects were included. Case reports, review articles, and studies with more than one modifiable factor were excluded.

#### Result

We included five studies consisted of three interventional and two observational studies with 3389 patients composed of 3027 normal individuals, 118 glaucoma patients, and 244 ocular hypertension patients. Three studies concluded that caffeine intake significantly increases IOP. Avisar's reported patients with glaucoma and ocular hypertension who were coffee drinker demonstrated a statistically significant elevation in IOP ( $p=0.0003$ ), Chadrasekaran's reported significant IOP increase in glaucoma patients with regular coffee drinker ( $p=0.03$ ), and Tran's reported a rise in IOP for glaucoma patients in caffeine test ( $p=0.004$ ).

#### Conclusion

Based on these studies, caffeine intake should be limited for patients with glaucoma or ocular hypertension, since there is a significant elevation in IOP. However, further studies are needed to investigate the long term effect of caffeine in IOP and optic nerve damage.

#### Keyword

caffeine, intraocular pressure

#### Category

Free Paper Presentation

#### Latest Update

July 21, 2020

## FP-GLA-03

### The Relationship between Blood Pressure and Primary Open Angle Glaucoma: a Cross-sectional Study

#### Abstract Title

The Relationship between Blood Pressure and Primary Open Angle Glaucoma: a Cross-sectional Study

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#### Abstract Type

Research

#### Introduction & Objective

Primary open-angle glaucoma (POAG) is a progressive optic neuropathy that leads to blindness. The development of POAG has multifactorial risks; one of them is vascular diseases. Elevated blood pressure (BP) is predicted to have associations with the eyes' vascular impairment while the decrease of BP is predicted to cause a drop in ocular perfusion pressure. Both high and low BP lead to an ischemic injury and damage of the optic nerve in some studies, this study aimed to evaluate the relation between blood pressure and POAG.

#### Method

The study was conducted as a cross-sectional case-control hospital medical record study with the period from January to December 2018. There were 67 cases and 71 controls. The BP compared with those hypertensive-hypotensive patients with glaucoma (cases) and hypertensive-hypotensive patients without glaucoma (controls).

#### Result

High diastolic BP (odds ratio: 6.476 with 95% CI 1.976-21.222) and low systolic BP (odds ratio: 5.625 with 95% CI 1.162-27.222) has a strong positive association with POAG, while high systolic BP (odds ratio: 20.900 with 95% CI 4.306-101.437) and low diastolic BP (odds ratio: 17.795 with 95% CI 4.015-78.866) has a weakly positive association with POAG in our study.

#### Conclusion

Our study concluded that high diastolic and low systolic BP was a strong risk factor for the development of POAG. However, further experimental studies are needed to investigate the mechanism of vascular disease and optic nerve damage.

#### Keyword

POAG, blood pressure, vascular disease

#### Category

Free Paper Presentation

#### Latest Update

August 01, 2020

#### Status

Submitted GLAOKOMA 3

## FP-GLA-04

### NEOVASCULAR GLAUCOMA WITH DIABETIC RETINOPATHY: A RETROSPECTIVE REVIEW FROM A TERTIARY EYE CARE CENTER IN INDONESIA

#### Abstract Title

NEOVASCULAR GLAUCOMA WITH DIABETIC RETINOPATHY: A RETROSPECTIVE REVIEW FROM A TERTIARY EYE CARE CENTER IN INDONESIA

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#### Abstract Type

Research

#### Introduction & Objective

Neovascular glaucoma is a secondary glaucoma characterized by the development of new blood vessels in the iris and / or angle. Neovascular glaucoma is associated with ischemic disease such as diabetic retinopathy. Delayed diagnosis and treatment may potentially cause vision loss. The aim of this study is to describe the clinical characteristics and management of neovascular glaucoma with diabetic retinopathy at Cicendo National Eye Center, Indonesia

#### Method

Medical record of patients with neovascular glaucoma caused by diabetic retinopathy from January 2017 until December 2018 were retrospectively reviewed. Age, gender, complete ophthalmology examinations, treatment, classification of diabetic retinopathy and neovascular glaucoma were reviewed.

#### Result

There were 97 medical records (104 eyes) were included in this study. Most of the patient were female with mean age was 52.6 years and 91.8% were unilateral. Mean initial intraocular pressure was 52.5 mmHg at the first visit. Most patients (72.1%) were in stage 3 with visual acuity

#### Conclusion

Neovascular glaucoma with diabetic retinopathy was frequent in females with type 2 diabetic mellitus. Most of the cases came in end stage neovascular glaucoma with high intraocular pressure and poor visual acuity. Proliferative diabetic retinopathy was the most common cause. Trabeculectomy and cyclodestructive were the most performed procedure. Mean pressure after treatment was found to decrease in all treatment groups, with the greatest found in the implant group.

#### Keyword

Glaucoma, Neovascular Glaucoma, Diabetic Retinopathy

#### Category

Free Paper Presentation

#### Latest Update

August 04, 2020

#### Status

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## FP-GLA-05

### CHARACTERISTIC AND SURGICAL OUTCOME OF UVEITIC GLAUCOMA

#### Abstract Title

CHARACTERISTIC AND SURGICAL OUTCOME OF UVEITIC GLAUCOMA

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#### Abstract Type

Research

#### Introduction & Objective

Glaucoma is a common complication in uveitis. Surgical intervention had been known for lower successful rate in Uveitic Glaucoma (UG) but still a treatment of choice when medical therapy no longer could control intraocular pressure (IOP). The aim of this study is to describe demographic, clinical characteristics of UG that received glaucoma surgery, and outcome of the surgery.

#### Method

Medical records of UG patients that received glaucoma surgery in 2018-2019 were reviewed. Age, gender, type and etiology of uveitis, duration of uveitis, IOP, visual acuity, gonioscopy, ocular characteristic, previous surgical and laser treatment, current surgical treatment, and complication were studied. Surgical outcome was classified in absolute success, partial success, and failure.

#### Result

There were 48 patients (57 eyes) with UG that received glaucoma surgery included. Mean age was 47,23±14,62 years old. Anterior uveitis was the most common type of UG. Mean uveitis duration before surgery was 13,75±17,65 months. Mean initial IOP was 35,81±13,30mmHg and at the final visit 15,09±3,36mmHg. Mean follow up duration was 6,41±4,02 months. The overall partial success was 75,44% in one month and 67,74% in 6 months.

#### Conclusion

Decrease in IOP was found in all surgical intervention, including Glaucoma Drainage Device (GDD) implant, trabeculectomy with 5Fluorouracyl (5FU), combined trabeculectomy cataract surgery with or without 5FU, and cyclodestructive laser surgery. There was high percentage of successful surgery but in short follow up period with many loss to follow up eyes.

#### Keyword

Glaucoma, Uveitis, Uveitic Glaucoma

#### Category

Free Paper Presentation

#### Latest Update

August 04, 2020

#### Status

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## FP-GLA-06

### COMPARISON OF VISION-RELATED QUALITY OF LIFE IMPROVEMENT IN GLAUCOMA PATIENTS COEXISTED WITH CATARACT AFTER PHACOTRABECCLECTOMY AND SEQUENTIAL SURGERY

#### Abstract Title

COMPARISON OF VISION-RELATED QUALITY OF LIFE IMPROVEMENT IN GLAUCOMA PATIENTS COEXISTED WITH CATARACT AFTER PHACOTRABECCLECTOMY AND SEQUENTIAL SURGERY

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#### Abstract Type

Research

#### Introduction & Objective

The goal of glaucoma treatment is to maintain the patient's visual function and related quality of life (QoL). Cataract surgery can improve QoL in patients with advanced glaucoma. Treatment for patients experiencing concurrent cataract and glaucoma includes both combined procedure (phacotrabeculectomy) and sequential surgery (phacoemulsification was further performed on the trabeculectomized eye). However, there is lack of consensus on the best approach to surgical management of such cases. The majority of studies focus their attention only on objective clinical measures as an assessment of the success of the intervention. Measurement of QoL can help us make decisions about the best treatments for the patient. To compare the QoL improvement 1 month after surgery between combined procedure and sequential procedure.

#### Method

This was a retrospective cross-sectional study that compared the QoL improvement 1 month after surgery using NEIVFQ-25. Subjects were divided into 2 groups: patient with advanced stage (VFI

#### Result

This study conducted in 38 persons (19 persons each groups) who had homogenous demographic characteristics. The improvement of best-corrected visual acuity (BCVA) occurred in both groups and positively-correlated with the improvement of QoL. However, the QoL improvements in combined group ( $22.33 \pm 16.89$ ) did not significantly differ from sequential group ( $19.07 \pm 12.41$ ;  $p=0.502$ ) even though the BCVA improvement in sequential group ( $0.38 \pm 0.22$ ) was greater significantly than combined group ( $0.21 \pm 0.25$ ;  $p$

#### Conclusion

There were no significant QoL improvement differences between combined group and sequential group.

#### Keyword

Quality of life, Phacotrabeculectomy, Sequential surgery

#### Category

Free Paper Presentation

#### Latest Update

August 06, 2020

#### Status

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## FP-GLA-07

### CORRELATIONS BETWEEN VISUAL FIELD INDEX AND QUALITY OF LIFE IN GLAUCOMA PATIENTS USING THE NEI-VFQ-25 QUESTIONNAIRE

#### Abstract Title

CORRELATIONS BETWEEN VISUAL FIELD INDEX AND QUALITY OF LIFE IN GLAUCOMA PATIENTS USING THE NEI-VFQ-25 QUESTIONNAIRE

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#### Abstract Type

Research

#### Introduction & Objective

Glaucoma management aims not only to maintain visual function, but also the patients' quality of life (QOL). A reliable visual field assessment is needed to monitor progression of glaucoma, as well as assessing visual disability. Visual Field

#### *Index (VFI) as the latest global index offers a practical summary of visual field Status and has the advantage of not being*

affected by cataract and focuses on the central visual field. To determine the correlation between visual field deterioration using VFI and the QOL of glaucoma patients using National Eye Institute Visual Function Questionnaire-25 (NEI-VFQ-25).

#### Method

We found 72 subjects who were diagnosed primary open or closed angle glaucoma on both eyes and whose visual fields were unaffected by other condition besides glaucoma. All subjects had reliable 24-2 or 30-2 visual field test within last 6 months and had been interviewed with NEI-VFQ-25 Indonesian version. Correlations were calculated between the better eye's VFI and NEI-VFQ-25 subscales. A single linear regression analysis was utilized between composite score and better eye's VFI.

#### Result

Modest correlations were found between VFI and majority of NEI VFQ subscales: general vision, near acuity, distance acuity, social function, mental health, role difficulties, and dependency. Weak correlations were found between VFI and ocular pain, and general health. Strong correlations were found between VFI and composite scores ( $r=0.746$ ).

#### Conclusion

A strong positive correlation was found between visual field defect as represented by VFI and with QOL in glaucoma patients.

#### Keyword

visual field, glaucoma, quality of life

#### Category

Free Paper Presentation

#### Latest Update

August 06, 2020

#### Status

Submitted

## FP-GLA-08

### CLINICAL OUTCOMES OF VARIOUS MICROPULSE TRANSSCLERAL CYCLOPHOTOCOAGULATION ENERGY SETTINGS FOR VERY HIGH INTRAOCULAR PRESSURE REFRACTORY GLAUCOMA

#### Abstract Title

CLINICAL OUTCOMES OF VARIOUS MICROPULSE TRANSSCLERAL CYCLOPHOTOCOAGULATION ENERGY SETTINGS FOR VERY HIGH INTRAOCULAR PRESSURE REFRACTORY GLAUCOMA

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#### Abstract Type

Research

#### Introduction & Objective

Majority refractory glaucoma patients in our settings came with very high intraocular pressure (IOP). Micropulse Transscleral Cyclophotocoagulation (MP-TSCPC) is a relatively new treatment that has no ideal parameter of energy settings for very high IOP refractory glaucoma cases so far. The aim of this study is to evaluate the outcomes of various energy settings of MP-TSCPC for very high IOP refractory glaucoma cases.

#### Method

This is a retrospective study involving 3 groups consist of 43 eyes from 43 patients treated once with MP-TSCPC within 3 months follow up at Cicendo National Eye Hospital. Each group got different energy setting; low energy (<100 J), moderate energy (100-200 J), and high energy (> 200 J). The main outcome measurement is IOP reduction, success rate, and post laser complications.

#### Result

The mean IOP at low energy group decreased from 51.1 mmHg to 37.3 mmHg at the final follow up ( $p=0.003$ ), mean IOP at moderate group decreased from 59.4 mmHg to 38.3 mmHg ( $p=0.001$ ) while mean IOP at high group decreased from 55.75 mmHg to 34.25 mmHg ( $p=0.001$ ). The success rate at the final follow up was 42.1% (low energy), 60% (moderate energy), and 62.5% (high energy). There were 2 complications in the high energy group consist of hyphema and bullous keratopathy.

#### Conclusion

Moderate energy setting of MP-TSCPC may be an ideal setting for very high IOP refractory glaucoma cases and still need to be done more than one time. Further evaluation with a new probe or modified delivery technique is still necessary.

#### Keyword

refractory glaucoma, laser, micropulse, transscleral cyclophotocoagulation

#### Category

Free Paper Presentation

#### Latest Update

August 13, 2020

#### Status

Approved As Free Paper

## FP-GLA-09

### Clinical Outcomes After Micropulse Transsclera Cyclophotocoagulation and Cyclocryotherapy in Uncontrolled Glaucoma Patients: 2-Years Retrospective Study

#### Abstract Title

Clinical Outcomes After Micropulse Transsclera Cyclophotocoagulation and Cyclocryotherapy in Uncontrolled Glaucoma Patients: 2-Years Retrospective Study

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#### Abstract Type

Research

#### Introduction & Objective

The aim of this study was to demonstrate clinical outcomes of micropulse transscleral cyclophotocoagulation (MPTSCPC) and cyclocryotherapy in uncontrolled glaucoma

#### Method

A retrospective review was done in all patients who underwent a MP-TSCPC and cyclocryotherapy at Cipto Mangunkusumo Hospital, Jakarta, Indonesia from January 2017 – December 2018.

#### Result

A total of 95 eyes were treated with MP-TSCPC (55 eyes) and cyclocryotherapy (40 eyes) in this study with follow up to 6 months. At 6 months, the mean intraocular pressure (IOP) was reduced from 46.57 to 31.8 mmHg in MP-TSCPC group and from 52.59 to 29.4 mmHg in cyclocryotherapy group. Success rate were 63.6% and 65% in MP-TSCPC and cyclocryotherapy group respectively, in which IOP was between 6 to 21 mmHg or at least 20% reduction in IOP at the final follow up with or without IOP lowering medication. There was also reduction in number of ocular antihypertensive medications used from 2.07 to 1.49 and 1.85 to 1.00 at final follow up. In MP-TSCPC group, complication included hypotony in 3 eyes (5.5 %) while in cyclocryotherapy group, hypotony was found in 1 eye (2.5%) and phthisical eye in 2 eyes (5%) at the end of follow up.

#### Conclusion

Both MP-TSCPC and cyclocryotherapy were effective in lowering IOP. Patients can expect significant IOP lowering along with reduction in number of topical glaucoma medications required to IOP control.

#### Keyword

Micropulse, cyclocryotherapy, glaucoma

#### Category

Free Paper Presentation

#### Latest Update

August 13, 2020

#### Status

Submitted

## FP-GLA-10

### Additional Glaucoma Drainage Device After Trabeculectomy and Glaucoma Drainage Device Failure in Juvenile Open Angle Glaucoma

#### Abstract Title

Additional Glaucoma Drainage Device After Trabeculectomy and Glaucoma Drainage Device Failure in Juvenile Open Angle Glaucoma

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#### Abstract Type

Case Report

#### Introduction

Juvenile open angle glaucoma (JOAG) is a subset of primary open angle glaucoma that affecting those who are between 5 and 35 years old, inherited but sporadic cases occasionally occur

#### Case Illustration

A 21-year-old man has been under long-term follow up since he was diagnosed with JOAG on both eyes. He complained tunnel vision with best corrected visual acuity on the right eye (RE) was 6/9 and the left eye (LE) was 1/60. The average intraocular pressure (IOP) was thirties on both eyes. The lens and retinas were normal. The cup-to-disc ratio was 0.9 on RE and 1.0 on LE. Gonioscopy showed that the angle was open to ciliary body band bilaterally without synechia. His RE has undergone trabeculectomy on January 2014 and was implanted superonasally with nonvalved Molteno Drainage on June 2014. His LE has undergone trabeculectomy on 2015 and was implanted inferotemporally with nonvalved Aurolab Aqueous Drainage Implant on 2016. To preserve the visual acuity further and control IOP of the RE, he had the Virna Glaucoma Drainage Device implanted superotemporally on February 2020. His BCVA of the right eye maintained at 6/9 and IOP was 14

#### Discussion

The major causes of failure in surgical management of JOAG are excessive fibrosis, glaucoma severity and multiple previous surgery. The patient's right eye, which had better vision, got additional glaucoma drainage implant to control the IOP.

#### Conclusion

Additional glaucoma drainage implant showed as excellent choice for controlling IOP and save the vision in JOAG.

#### Keyword

Juvenile open angle glaucoma, glaucoma drainage device, trabeculectomy

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Approved As E-Poster

## FP-GLA-11

### Teleglaucoma and its Cost-Effectiveness: a Systematic Review

#### Abstract Title

Teleglaucoma and its Cost-Effectiveness: a Systematic Review

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#### Abstract Type

Research

#### Introduction & Objective

The economic burden of glaucoma is high. It affects personal and national economy related with the direct cost of treatment and loss of productivity. Teleglaucoma is a technology via electronic transmission of fundus photographs to identify glaucoma cases and those at risk from a distance. It helps manage glaucoma to preserve vision with an efficient healthcare cost. We performed a systematic review to summarize the evidence to address the cost-effectiveness of teleglaucoma.

#### Method

This study was conducted by doing literature search from Pubmed up to 26 July 2020. Studies in English and human subjects with full text available were included. Case reports, review articles, and studies with no data about costeffectiveness were excluded.

#### Result

We identified three studies consisting of 3 observational studies. These studies included about 1035 patients with teleglaucoma service and 2493 patients with standard care (in-person examination). They concluded that teleglaucoma has lower cost since there is a decrease in human resources and diagnostic equipment cost. The amount of cost saved by teleglaucoma varies, ranging from 2% to 80%.

#### Conclusion

Teleglaucoma considerably saved costs to patients and health care systems, as it saved patients' time, reduced patients' travel cost, and improved access to ophthalmologists.

#### Keyword

teleglaucoma, teleophthalmology, glaucoma, cost-effectiveness

#### Category

Free Paper Presentation

#### Latest Update

August 14, 2020

#### Status

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## FP-GLA-12

### COMPARISONS OF TRABECULECTOMY WITH MITOMYCIN-C AND 5-FLUOROURACIL SUCCESS RATE IN GLAUCOMA PATIENTS IN KARIADI HOSPITAL

#### Abstract Title

COMPARISONS OF TRABECULECTOMY WITH MITOMYCIN-C AND 5-FLUOROURACIL SUCCESS RATE IN GLAUCOMA PATIENTS IN KARIADI HOSPITAL

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#### Abstract Type

Research

#### Introduction & Objective

Trabeculectomy is still the first choice procedure for glaucoma patients. These procedures sometimes need antimetabolite for adjunctive treatment to increase success rate. The aim of this study was to compare the outcome of trabeculectomy with mitomycin-C (MMC) and 5-fluorouracil (5FU) for surgical treatment of glaucoma in Kariadi Hospital, Semarang, Central Java.

#### Method

Retrospective study was conducted in glaucoma patients who underwent trabeculectomy with intraoperative usage of MMC and 5FU in 2019 at Kariadi Hospital. The secondary data of baseline visual acuity and intra ocular pressure (IOP), 1 day, 1 week, 2 weeks, 1 month, and 3 months after trabeculectomy is obtained from medical records. Comparisons between both groups were then analyzed.

#### Result

Seventeen eyes from 16 patients underwent trabeculectomy with MMC, and 16 eyes from 14 patients underwent trabeculectomy with 5FU. Complete success rate of trabeculectomy with MMC in 3 months follow up was 17.6%, while 5FU was 18.8%. Qualified success rate in 3 months follow up of trabeculectomy with MMC and 5FU were 35.3% and 50% respectively. Failure rate in 3 months follow up of trabeculectomy with MMC was 47.1%, while 5FU was 31.3%. The differences of success rate between both groups were not significant ( $p = 0,622$ ). The differences of IOP reduction after 3 months follow up between both groups was significant ( $p = 0,045$ ).

#### Conclusion

Success rate of trabeculectomy with MMC is lower than trabeculectomy with 5FU but not statistically significant.

#### Keyword

Trabeculectomy, mitomycin-C, 5-fluorouracil

#### Category

Free Paper Presentation

#### Latest Update

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## FP-GLA-13

### THE EFFECT OF EXPOSURE TIME TO TOPICAL DEXAMETHASONE ON THE THICKNESS OF EXTRACELLULAR MATRIX OF TRABECULAR MESHWORK OF WISTAR MICE

#### Abstract Title

THE EFFECT OF EXPOSURE TIME TO TOPICAL DEXAMETHASONE ON THE THICKNESS OF EXTRACELLULAR MATRIX OF TRABECULAR MESHWORK OF WISTAR MICE

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#### Abstract Type

Research

#### Introduction & Objective

The extracellular matrix (ECM) of trabecular meshwork was involved in homeostatic outflow facility of aqueous humor. It was reported that the use of topical dexamethasone eye drop could increased an intraocular pressure. Unfortunately, there were no research has been done to study the effects of local dexamethasone exposure time towards the changes the matrix structure. The purpose of this study was to revealed the effect of long exposure time to topical dexamethasone on the Wistar mice ECM trabecular meshwork thickness.

#### Method

Design of the study was a posttest only controlled group design. A total of 36 mices were allocated into 6 groups : 3 group of treatment groups (dexamethasone 4 times a day) which were observed up to week-2, 4, and 6, and 3 control groups which been given (artificial tears 4 times a day) and observed along with treatment groups. Extracellular matrix changes were grading by histopathology scores, and data were analyzed with Mann Whitney Test.

#### Result

The results showed that on week-2, they were no matrix extracellular thickening, ( $p > 0.05$ ). On week-4 extracellular mild thickening, ( $p$

#### Conclusion

This study showed that the long exposure time of topical dexamethasone could increased the thickness of ECM trabecular meshwork.

#### Keyword

steroids, dexamethasone, trabecular meshwork

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

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## FP-GLA-14

### OCT ANGIOGRAPHY IMAGING OF THE OPTIC NERVE HEAD IN HEALTHY AND GLAUCOMA EYES

#### Abstract Title

OCT ANGIOGRAPHY IMAGING OF THE OPTIC NERVE HEAD IN HEALTHY AND GLAUCOMA EYES

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#### Abstract Type

Research

#### Introduction & Objective

The potential roles of retinal blood flow and microvasculature have been extensively investigated as the pathogenic cause of glaucoma, besides of mechanical factor from the intraocular pressure. Optical Coherence Tomography Angiography (OCTA) is a technique to quantify the assessment of optic nerve head (ONH) microcirculation. This study aimed to compare ONH vessel density and flux index in patients with open angle glaucoma (OAG) and healthy subjects.

#### Method

This is an age-matched cross-sectional study of 18 healthy and 18 glaucoma eyes. The Humphrey Field Analyzer (HFA) and SD-OCT was performed to all subjects to determine the diagnosis of glaucoma. The average vessel density (%) and flux index of ONH microvasculature was measured using OCTA (Angioplex, Zeiss Meditec Inc., Dublin, CA). independent t-test was used to compare the differences of those ONH vascular parameters among both groups.

#### Result

The mean age was 32.44±16.147 years and 31.39±15.178 years in healthy and glaucoma group, respectively (p=0.913). ONH average vessel density was statistically significant lower in glaucoma eyes with 43.37±4.37% compare to healthy eyes with 46.8±2.08% (p=0.016). The flux index was slightly lower in glaucoma group with 0.423±0.40 compare to healthy group 0.447±0.027, although it was not statistically significant (p=0.074). Significant correlations were found between ONH perfusion and MD HFA (r= 0.686) also with VFI HFA (r=0.666).

#### Conclusion

ONH perfusion was reduced in glaucoma eyes to healthy eyes. The reduction of ONH perfusion was correlated with the severity of visual field loss. These findings suggest that ONH perfusion assessment may offer additional detection of glaucoma.

#### Keyword

glaucoma, OCT angiography, vessel density

#### Category

Free Paper Presentation

#### Latest Update

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#### Status

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## FP-GLA-15

### CHARACTERISTICS OF PATIENTS IN GLAUCOMA CLINIC DURING COVID-19 PANDEMIC IN BALI MANDARA EYE HOSPITAL

#### Abstract Title

CHARACTERISTICS OF PATIENTS IN GLAUCOMA CLINIC DURING COVID-19 PANDEMIC IN BALI MANDARA EYE HOSPITAL

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#### Abstract Type

Research

#### Introduction & Objective

The American Academy of Ophthalmology strongly recommends that all ophthalmologists provide only urgent or emergent care during the COVID-19 pandemic includes polyclinic outpatients service. This report aimed to present demographical data regarding the characteristic of outpatients in the glaucoma clinic in Bali Mandara Eye Hospital.

#### Method

Cross-sectional observational study using convenience sampling method. Patient data were collected from the medical record of glaucoma outpatients at Bali Mandara Eye Hospital from March until July 2020.

#### Result

There was 634 patient attendance with the lowest visit at the end of March until the end of April 2020. All outpatients were following safety precautions without exception before service. The mean number of visit for each patient were 1.09 ±1.4 times. Most patient were diagnosed with post-procedural phacoemulsification 105(16.6%) patients, POAG 103 (16.2%) patients, PACG 93(14.7%) patients. The diagnosis later classified further into emergency level categories based on patient condition with the highest category were high-risk patients 269 (42.4%). There were also statistically more patients age 60 years old and older with high and moderate risk glaucoma compared with low-risk glaucoma (c2 test, prevalence ratio 1.55, CI 1.1-1.5), p= 0.09. This result leads to awareness that patients with older age were present with more advanced glaucoma stage and have an urge to control regularly to save their vision while at the same time increasing their exposure to COVID-19.

#### Conclusion

The elderly have higher immediate priority to balancing their risk of developing glaucoma-related visual impairment during mitigation against their risk of exposure of COVID-19.

#### Keyword

COVID-19, Glaucoma, Outpatients

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## FP-GLA-16

### THE EFFECT OF EXPOSURE TIME TO TOPICAL PREDNISOLON ON THE THICKNESS OF EXTRACELLULAR MATRIX OF TRABECULAR MESHWORK OF WISTAR RAT THE EFFECT OF EXPOSURE TIME TO TOPICAL PREDNISOLON ON THE THICKNESS OF EXTRACELLULAR MATRIX OF TRABECULAR MESHWORK OF WIST

#### Abstract Title

THE EFFECT OF EXPOSURE TIME TO TOPICAL PREDNISOLON ON THE THICKNESS OF EXTRACELLULAR MATRIX OF TRABECULAR MESHWORK OF WISTAR RAT THE EFFECT OF EXPOSURE TIME TO TOPICAL PREDNISOLON ON THE THICKNESS OF EXTRACELLULAR MATRIX OF TRABECULAR MESHWORK OF WIST

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#### Abstract Type

Research

#### Introduction & Objective

Trabecular meshwork which border the Schlemm canal, function to regulate the flow of aqueous humor. Prednisolone is reported to cause glaucoma, but there has been no research on topical exposure that can cause changes the thickness of the extracellular matrix of the trabecular meshwork. Purpose of this study was to revealed the effect of long exposure time to topical prednisolone on the Wistar rat ECM trabecular meshwork thickness

#### Method

Design was a posttest only controlled group design. Total of 36 rats were allocated into 6 groups: 3 control groups which been given (artificial tears 4 times a day); 3 group of treatment groups (prednisolone 4 times a day) which were observed up to week-2, 4, 6. Extracellular matrix changes were grading by histopathology scores. Data were analyzed with Mann Whitney Test

#### Result

Showed on week-2, they were no matrix extracellular thickening, ( $p > 0.05$ ). On week-4 there were mild thickening in 4 sample, moderate thickening in 1 sample, severe thickening in 1 sample ( $p$

#### Conclusion

The long exposure time of topical prednisolone could increase the thickness of ECM trabecular meshwork of wistar rat

#### Keyword

steroids, prednisolone acetate, trabecular meshwork

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## FP-GLA-17

### ANTIFIBROSIS EFFECT OF LIMBAL MESENCHYMAL STEM CELL'S CONDITIONED MEDIA ON TGF- $\beta$ AND $\alpha$ -SMA EXPRESSION IN HUMAN TENON FIBROBLAST AS WOUND HEALING MODEL AFTER TRABECULECTOMY IN VITRO

#### Abstract Title

ANTIFIBROSIS EFFECT OF LIMBAL MESENCHYMAL STEM CELL'S CONDITIONED MEDIA ON TGF- $\beta$  AND  $\alpha$ -SMA EXPRESSION IN HUMAN TENON FIBROBLAST AS WOUND HEALING MODEL AFTER TRABECULECTOMY IN VITRO

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#### Abstract Type

Research

#### Introduction & Objective

Trabeculectomy failure still remain high because of bleb fibrosis. It begins with fibrotic factors expression such as TGF- $\beta$  and  $\alpha$ -SMA. Limbal mesenchymal stem cell's conditioned media (LMSCs-CM) known to has antifibrotic effect in human tissues. This study aimed to investigate the capability of LMSCs-CM in reducing TGF- $\beta$  and  $\alpha$ -SMA expression in human tenon fibroblasts (HTFs) of glaucomatous eye.

#### Method

Human Tenon Fibroblasts, as key effector of bleb fibrosis after trabeculectomy, were isolated from tenon's tissue in eye with glaucoma. HTFs were cultured and divided into 3 groups consist of FBS 2% control group, MMC group, and LMSCs-CM group. After 7 days, TGF- $\beta$  and  $\alpha$ -SMA expression were assessed by immunofluorescence staining and its intensity was measured using ImageJ software. The results between groups were analyzed using Kruskal-Wallis or oneway ANOVA test followed by post-hoc test with 95% confidence ( $p$

#### Result

LMSCs-CM successfully decreases TGF- $\beta$  ( $95.77 \pm 8.27$  pixels) and  $\alpha$ -SMA ( $143.44 \pm 15.84$  pixels) expressions. These are considered significantly lower than control group ( $p$

#### Conclusion

LMSCs-CM has a role as antifibrotic agent in HTFs by reducing profibrotic factor, TGF- $\beta$  and  $\alpha$ -SMA.

#### Keyword

Limbal mesenchymal stem cell's conditioned media, trabeculectomy, antifibrotic effect

#### Category

Free Paper Presentation

#### Latest Update

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#### Status

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## FP-GLA-18

### PERIPAPILLARY VESSEL DENSITY AND IT'S CORRELATION WITH RETINAL NERVE FIBER LAYER THICKNESS IN OPEN ANGLE GLAUCOMA PATIENTS

#### Abstract Title

PERIPAPILLARY VESSEL DENSITY AND IT'S CORRELATION WITH RETINAL NERVE FIBER LAYER THICKNESS IN OPEN ANGLE GLAUCOMA PATIENTS

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#### Abstract Type

Research

#### Introduction & Objective

Glaucoma is a group of optic neuropathy. Open angle glaucoma (OAG) is the most common form. Optical Coherence Tomography Angiography (OCTA) is the new imaging technique to quantify the assessment of optic nerve head (ONH) microcirculation. This study aimed to correlate the perfusion in the ONH and retinal nerve fiber layer (RNFL) Thickness in OAG patients

#### Method

This was a cross-sectional study of 28 eyes (14 patients) consists, 10 male and 18 female. The Humphrey Visual Field Analysis (HFA) and SD-OCT was performed to all subjects to determine the diagnosis of glaucoma. The average peripapillary vessel density (%) and flux index of ONH microvasculature was measured using OCTA (Angioplex, Zeiss Meditec Inc., Dublin, CA). We divided patients in to two group according the severity using Mean Defect indicator on HFA Examination. Correlation between ONH perfusion and RNFL Thickness were analyzed using linear regression

#### Result

Mean age was 55.14±11.49 and 57.14±11.12 in eyes with MD >-10 (group 1) and MD

#### Conclusion

RNFL thickness was correlate with peripapillary vessel density and flow index in OAG patients.

#### Keyword

glaucoma, RNFL thickness. Peripapillary Vessel Density

#### Category

Free Paper Presentation

#### Latest Update

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#### Status

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## FP-GLA-19

### PATIENT'S PERSPECTIVE AND ATTITUDE TOWARDS GLAUCOMA ROUTINE OPHTHALMIC CARE IN COVID-19 ERA

#### Abstract Title

PATIENT'S PERSPECTIVE AND ATTITUDE TOWARDS GLAUCOMA ROUTINE OPHTHALMIC CARE IN COVID-19 ERA

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#### Abstract Type

Research

#### Introduction & Objective

To investigate the perspective and attitude of glaucoma patients in the term of routine ophthalmic care and visual disabilities during the Coronavirus Disease 2019 (COVID-19) pandemic.

#### Method

This is a qualitative study that utilized as face-to-face semi-structured interviews to investigate the level of glaucoma perspective and attitude in the Tertiary Referral Hospital Yogyakarta. Purposive, non-random sampling technique was used to recruit the participants, and data were collected from 110 participants (14 children (12.73%) and 96 adults (87.27%)) using semi-structured interview. The resulting data were analyzed using SPSS software and descriptive analysis.

#### Result

Of the 110 interviewees 18 (16.36%) live in urban areas, and 92 (83.64%) live in the rural areas; 52 (47.27%) of the participants were male and 58 (52.73%) were females. All patients has coverage of Indonesian National Health Insurance program, covering the examination and drug of glaucoma. Patients reported that they have no difficulty to reach the Tertiary Referral Hospital in Yogyakarta before and during Covid-19 Pandemic (89.09% and 90.00% respectively). Majority of patients reported of having no difficulties in providing health care-cost of glaucoma (91.82%), and acquiring the drug (93.64%). Scheduled 6 monthly routine visit was agreed by 106 (96.36%) patients. Most of our patients followed the update of COVID-19 (78.18%).

#### Conclusion

There are good perspective and attitude of glaucoma routine ophthalmic care during COVID-19 pandemic in Tertiary Hospital patients. More data need to be acquired in Primary Health Care setting

#### Keyword

COVID-19, Patient's Perspective, Glaucoma

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

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## FP-NO-01

### MR IMAGING IN PAPILLEDEMA PATIENTS: DISTINGUISHING IIH FROM TUMOR

#### Abstract Title

MR IMAGING IN PAPILLEDEMA PATIENTS: DISTINGUISHING IIH FROM TUMOR

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#### Abstract Type

Research

#### Introduction & Objective

Papilledema is optic disc swelling due to increase of intracranial pressure (ICP) with various sign and symptom. Noninvasive neuroimaging such as MRI could help in identifying the etiology as well as evaluating variation of imaging sign in papilledema. Early identification of papilledema and increase of ICP is important for visual recovery.

#### Method

The characteristics data of 13 papilledema patients who had identified sign on MRI between January 2019 and May 2020 were documented. In a retrospective analysis, the variation of imaging sign in 7 patients with intracranial tumor and 6 patients without intracranial tumor or Idiopathic Intracranial Hypertension (IIH) were compared using the Fisher's exact test.

#### Result

In this study, papilledema patients are from 22 to 54 years old with 12 female and 1 male. Visual acuity for right and left eye are similar with log-MAR  $1.68 \pm 0.89$  and  $1.42 \pm 0.98$ , respectively. Imaging sign ?attening of the posterior sclera, protrusion of the optic disc, widening of the ONS, and tortuosity of the ON were presence in tumor patients with percentage 42.9%, 14.3%, 42.9%, and 28,6%, respectively. Flattening of the posterior sclera and tortuosity of the ON were not found in IIH. However, there was no statistically difference in papilledema patients with tumor or IIH.

#### Conclusion

Etiology of papilledema can be established by MRI. More variety of imaging signs were found in papilledema cause by tumor than IIH. IIH may have a subtle imaging signs and difficult to distinguish from tumor patients.

#### Keyword

papilledema, MRI, IIH

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Submitted

## FP-NO-02

### FEATURE OF TRAUMATIC OPTIC NEUROPATHY PATIENT BASED ON RADIOLOGY AND ONSET CORTICOSTEROID THERAPY IN CIPTO MANGUNKUSUMO HOSPITAL 2019: A CASE SERIES

#### Abstract Title

FEATURE OF TRAUMATIC OPTIC NEUROPATHY PATIENT BASED ON RADIOLOGY AND ONSET CORTICOSTEROID THERAPY IN CIPTO MANGUNKUSUMO HOSPITAL 2019: A CASE SERIES

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#### Abstract Type

Research

#### Introduction & Objective

Traumatic Optic Neuropathy is a rare and potentially vision-threatening condition caused by ocular or head trauma. The optic nerve axons may be damaged either directly or indirectly. The management of traumatic optic neuropathy could be observed, giving steroids or decompression. At center which optic nerve decompression is not routinely performed, high dose steroid is preferred for traumatic optic neuropathy patients. The study aims to analyze characteristics (mean age and gender, onset trauma, most symptom, visual acuity, consensual reflex as a sign), radiology feature, and onset corticosteroid therapy on patient traumatic optic neuropathy.

#### Method

This study was a descriptive observational case series which data retrospectively analysis from medical record

#### Result

From 13 cases most common gender affected were males (76,9%). The mean age group  $32.85 \pm 14,67$  years old with blurry vision and bleeding are the most common symptom, the onset of trauma below 24 hours (76.9%), the initial visual acuity is no light perception and hand movement with a negative consensual reflex (76,9%). Visual acuity improves with initial corticosteroid therapy below 24 hours are 7 cases and more than 24 hours are 2 cases. From 9 cases with visual acuity improvement, there are 4 cases with orbital fracture and 5 cases without orbital fracture.

#### Conclusion

Visual improvement in our cases happened more on initial corticosteroid therapy more than 24 hours and no orbital fracture.

#### Keyword

Traumatic Optic Neuropathy, Corticostreoid therapy, Radiology Feature

#### Category

Free Paper Presentation

#### Latest Update

August 07, 2020

#### Status

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### FP-NO-03

## RETINAL GANGLION CELL DENSITY IN RAT MODEL OF TRAUMATIC OPTIC NEUROPATHY AFTER ADMINISTRATION OF RECOMBINANT HUMAN ERYTHROPOIETIN, METHYLPREDNISOLONE, AND COMBINATION THERAPY

### Abstract Title

RETINAL GANGLION CELL DENSITY IN RAT MODEL OF TRAUMATIC OPTIC NEUROPATHY AFTER ADMINISTRATION OF RECOMBINANT HUMAN ERYTHROPOIETIN, METHYLPREDNISOLONE, AND COMBINATION THERAPY

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### Abstract Type

Research

### Introduction & Objective

Traumatic optic neuropathy (TON) can cause permanent visual impairment. Methylprednisolone has been the mainstay therapy, despite its debated benefit. Recombinant human erythropoietin (rhEPO) has a neuroprotective effect on the central nervous system. There was no previous study reported the effect of combination therapy of methylprednisolone and rhEPO on TON. This study was conducted to compare the retinal ganglion cell (RGC) density in rat model of TON after methylprednisolone, rhEPO, and combination therapy.

### Method

Animal experimental study was carried out using 21 male Wistar rats, divided into 3 groups randomly. Optic nerve crush procedure was performed in all groups. Afterward, group I received methylprednisolone, group II received rhEPO, and group III received combination therapy. Seven days later, enucleation and histopathological examination were performed to assess the RGC density in all groups.

### Result

RGC density in group I was  $94.86 \pm 10.253$  cells; group II was  $102.57 \pm 4,276$  cells; and group III was  $105.42 \pm 9,863$  cells. There was no significant difference of RGC density between the three groups ( $p = 0.084$ ). RGC density in group I was lower than group II, but not statistically significant ( $p = 0.110$ ). RGC density in group I was significantly lower than group III ( $p = 0.033$ ). RGC density in group II was not significantly different from group III ( $p = 0.541$ ).

### Conclusion

RGC density in rat model of TON after combination therapy of methylprednisolone and rhEPO was significantly higher than methylprednisolone alone, but not significantly different than rhEPO alone.

### Keyword

Traumatic optic neuropathy, methylprednisolone, recombinant human erythropoietin

### Category

Free Paper Presentation

### Latest Update

August 11, 2020

### Status

Submitted

### FP-NO-04

## CHARACTERISTICS OF OCULAR MYASTHENIA GRAVIS PATIENTS IN NATIONAL EYE CENTER CICENDO EYE HOSPITAL

### Abstract Title

CHARACTERISTICS OF OCULAR MYASTHENIA GRAVIS PATIENTS IN NATIONAL EYE CENTER CICENDO EYE HOSPITAL

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### Abstract Type

Research

### Introduction & Objective

Myasthenia gravis is an autoimmune disease which is characterized by fluctuating muscle weakness. The disease is diagnosed from the history, physical examination, pharmacological and electrophysiological examination. Pyridostigmine is usually used as initial management of this disease. This study aims to describe the clinical characteristics, diagnostic testing and treatment of myasthenia gravis patients in the National Eye Center Cicendo Eye Hospital.

### Method

This study is a descriptive study and the data were collected retrospectively from the medical records of 58 patients who were diagnosed as myasthenia gravis over the period of January 1st 2015 to December 31st 2018. Age, gender, clinical features, classification, associated diseases, diagnostic testing and therapy were reviewed retrospectively.

### Result

A total of 58 patients were diagnosed as myasthenia gravis. Among these patients, 63.79% were less than 50-year-old of age and 62.07% of patients were female. Ptosis was found in 96.55% patients and 86.21% patients were diagnosed as ocular myasthenia gravis. Positive results of ice pack test were shown in 91.30% of patients. Pyridostigmine was used to manage 94.83% patients.

### Conclusion

Ocular myasthenia gravis was the most common form of myasthenia gravis patients in Cicendo Eye Hospital. Clinical examination in office setting may still be used to establish the diagnosis of myasthenia gravis. Pyridostigmine was the treatment of choice in most patients.

### Keyword

Ocular myasthenia gravis, pyridostigmine

### Category

Free Paper Presentation

### Latest Update

August 12, 2020

### Status

Submitted

## FP-NO-05

### Evaluation of 97 Graves' Ophthalmopathy Patients Over a 3-Year Period Using EUGOGO Algorithm

#### Abstract Title

Evaluation of 97 Graves' Ophthalmopathy Patients Over a 3-Year Period Using EUGOGO Algorithm

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#### Abstract Type

Research

#### Introduction & Objective

Graves' ophthalmopathy (GO) is an autoimmune disorder of the orbit that is closely associated with Graves' diseases. Various classification system was proposed to evaluate clinical findings in GO. As controversy exists in assessment and management of GO there is a need to evaluate and improve diagnostic criteria using practical guideline.

#### Method

We retrospectively reviewed Graves' ophthalmopathy patients admitted between 2016 – 2018 to neuro-ophthalmology clinic. Clinical manifestation, the activity, severity and management of the disease were assessed using EUGOGO scale and Clinical Activity Score (CAS).

#### Result

A total of 97 GO patients included in the study. Male to female ratio is 1:2.7 which is highest in the age range of 30-50 years. The majority of patients have hyperthyroid Status (41.2%) and bilateral clinical characteristics (77%). A total of 92 patients (94.8%) had visual acuity  $\geq 6/18$ . The most commonly reported clinical sign at the time of assessment is eyelid edema followed by conjunctival injection. Patients with mild EUGOGO Status was entirely GO inactive while 5 active GO patients were of moderate-to-severe (4 patients) and 1 patient with sight-threatening GO. Patients with active GO received 1x500 mg of intravenous methylprednisolone for 3 days every week for 4 cycles where at the follow-up there was a significant decrease in CAS score by an average of 3-4 points.

#### Conclusion

The EUGOGO classification system provides diagnostic guidance and appropriate management algorithms for GO patients. Administration of high-dose intravenous methylprednisolone in active GO is still the first choice of therapy.

#### Keyword

Graves' Ophthalmopathy, EUGOGO, CAS

#### Category

Free Paper Presentation

#### Latest Update

August 14, 2020

#### Status

Submitted

## FP-NO-06

### Relationship Between Blood Pressure, Ocular Pulse Pressure and Disk at Risk with Visual Field Defects in Anterior Ischemic Optic Neuropathy

#### Abstract Title

Relationship Between Blood Pressure, Ocular Pulse Pressure and Disk at Risk with Visual Field Defects in Anterior Ischemic Optic Neuropathy

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#### Abstract Type

Research

#### Introduction & Objective

Purpose: To investigate the relationship between blood pressure (systolic and diastolic), ocular pulse pressure, and disk at risk with visual field defects in patients with anterior ischemic optic neuropathy

#### Method

Design: Observational retrospective study. Method: A total of 88 consecutive eyes (from 67 subjects) admitted to our hospital from July 2019 to July 2020. Patients were categorized into two major types of visual field defects, examination with Goldmann kinetic perimeter. Blood pressure were categorized according to JNC 8, examination with mercury sphygmomanometer. Data regarding systolic, diastolic, ocular pulse pressure, intra ocular pressure, disk at risk and history of systemic risk factor by the medical records were recorded

#### Result

Results: Patients (n=67) dominated by male >65 years (8; 11,9%), increased in younger age 45-65 years (52; 77,6%) and decreased in 0.05). Mean of diastolic  $87.05 \pm 7.09$  ( $p > 0.05$ ). Mean of OPP  $53.17 \pm 6.80$  ( $p > 0.05$ ). From consecutive eyes (n=88) were majority unilateral (46; 68,6%) had arcuate visual field defects 41 (61,2%) and altitudinal defects 26 (38,8%)  $p > 0.05$ . Patient with CD 0 (disk at risk) fellow eye, the relationship of group 1 and group 2 was statistically significant difference ( $p$ )

#### Conclusion

Conclusions: Most of patients in this study show that disk at risk (CD 0) on the fellow eye correlate with arcuate defects.

#### Keyword

Keywords: visual field defects, disk at risk, systolic, diastolic, ocular pulse pressure, anterior ischemic optic neuropathy

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Submitted

## FP-NO-07

### Evaluation of 51 patients with Ethambutol Optic Neuropathy : a Retrospective Study

#### Abstract Title

Evaluation of 51 patients with Ethambutol Optic Neuropathy : a Retrospective Study

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#### Abstract Type

Research

#### Introduction & Objective

Indonesia still has a large number of Tuberculosis incident, according to WHO in 2018. As the result, the number of patient with ethambutol consumption would be equally high. Among many side effects of anti-tuberculosis therapy, Ethambutol Optic Neuropathy (EON) is one well-known side effect with variably reported incidents from 1,5-10%. This study is conducted to review clinical features and treatment outcomes of patients with EON. And to identify factors affecting outcomes of patients diagnosed with EON in Neuro-Ophthalmology Division, RSCM Kirana during 2017-2018.

#### Method

Retrospective descriptive study

#### Result

There were 51 patients with newly diagnosed EON during this 2 years period. The mean age of patients was 44,9 years old, with no significant difference in number between men and women (17and 20 respectively). Recorded drug consumption period reveal the average of 6,2 months. From 51 patients, only 12 underwent follow up for a minimum 6 months, and improvement was found in 8 out of 12 patients. When the 12 patients classified further into groups of improved and unimproved, neither age, sex, drug consumption period nor initial acuity showed significant number of difference.

#### Conclusion

Patients diagnosed with EON in RSCM Kirana, mostly are diagnosed quite late, with poor initial acuity. Improvements are generally good after 6 months follow up, but no identified factors appear to correlate with this outcome.

#### Keyword

Ethambutol, ethambutol optic neuropathy

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-NO-08

### Relationship Between Lamina Cribrosa Depth With Visual Field Defect In Myopia Patient

#### Abstract Title

Relationship Between Lamina Cribrosa Depth With Visual Field Defect In Myopia Patient

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#### Abstract Type

Research

#### Introduction & Objective

Myopia can cause anatomic and function changes in the optic nerve head. Lengthening the axial length in myopia causes scleral thinning so scleral support becomes weak and affects compression of lamina cribrosa (LC). Continuous compression of LC can cause visual field defects. The objective is to analyze relationship between LC depth with visual field defect in moderate and high myopia patient.

#### Method

The research was observational analytic with a cross sectional study. Samples of research were 36 hospital employees with moderate and high myopia, conducted in Eye Polyclinic Dr. M. Djamil Hospital Padang from December 2019-February 2020. Subjects were examined for LC depth with HD 5 line raster enhanced depth imaging-optical coherence tomography (EDI-OCT) and visual field defect with SITA standard 24:2 strategy Humphrey's perimetry. Data was processed and analyzed with unpaired T test, chi square, and Pearson correlation test with  $p < 0,05$  was consider significant.

#### Result

The highest age in moderate and high myopia is 30-40 years. Most sex in moderate and high myopia is female. There was a significant difference in LC depth in moderate and high myopia ( $p=0,000$ ). There was a significant visual field defect in moderate and high myopia ( $p=0,044$ ). The relationship between LC depth and visual field defect in moderate and high myopia was significant ( $r=0,451$ ,  $p=0,044$ ).

#### Conclusion

LC depth is deeper in high myopia than moderate myopia. Visual field defects are more severe in high myopia than moderate myopia. The deeper LC depth, the more severe visual field defect in moderate and high myopia patient.

#### Keyword

Lamina cribrosa depth, Visual field defect, Myopia

#### Category

Free Paper Presentation

#### Latest Update

July 29, 2020

#### Status

Approved As Free Paper

## FP-IIM-01

### Effect of hormonal contraception on the tear film and ocular surface

#### Abstract Title

Effect of hormonal contraception on the tear film and ocular surface

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-

#### Abstract Type

Research

#### Introduction & Objective

To analyze the changes occurring in the tear film and ocular surface in young women using hormonal contraceptive agent in Padang, Indonesia.

#### Method

A cross-sectional study and the participants consisted of 56 healthy women of childbearing ages, aged 20 to 45 years old, divided into two groups; the experimental group (women using hormonal contraceptives) and the control group. All participants have interviewed with OSDI questionnaire. Tear secretion and tear stability were measured using Schirmer test and fluorescein TBUT, respectively. Ocular surface impression cytology with cellulose acetate filter paper was taken from inferonasal bulbar conjunctiva and was stained with Periodic Acid- Schiff and counter-stained with hematoxylineosin.

#### Result

There were no significant differences in tear secretion and tear stability between the experimental and control groups ( $P > 0.05$ ). Within experimental group, women who used injection hormonal contraceptives had the lowest mean value of Schirmer test and TBUT compared to combined oral contraceptives and subdermal implant contraceptives users, but this was not statistically significant. There was a statistically significant decrease of goblet cell density and conjunctival epithelium metaplasia, where 25% participants in experimental group had an abnormal impression cytology result compared with none in control group. The experimental group also had higher OSDI score than the control group, but this was not statistically significant.

#### Conclusion

Hormonal contraceptives had no significant effect on dry eye symptoms, tear secretion and stability on women of childbearing age. Ocular surface alteration found on women using hormonal contraceptives is subclinical and not correlated with symptoms and signs of dysfunctional tear film.

#### Keyword

hormonal contraception, tear secretion, tear stability, impression cytology, dry eye.

#### Category

Free Paper Presentation

#### Latest Update

July 20, 2020

#### Status

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## FP-IIM-02

### CHARACTERISTICS OF AMNION MEMBRANE TRANSPLANTATION PATIENTS AT MENCIRIM 77 EYE HOSPITAL

#### Abstract Title

CHARACTERISTICS OF AMNION MEMBRANE TRANSPLANTATION PATIENTS AT MENCIRIM 77 EYE HOSPITAL

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#### Abstract Type

Research

#### Introduction & Objective

Lee and Tseng first introduced the use of amniotic membrane in the treatment of persistent epithelial defect (PED) with corneal ulcer. The membrane has been used successfully to treat PED and ulcers from different causes. Amniotic membrane (AM) can function in the eye as a basement membrane substitute or as a temporary graft. It has anti-inflammatory and anti-scarring effects and contains growth factors that promote epithelial wound healing on the surface of the eye, inhibit the hyperplasia of fibrovascular tissue and the formation of neovascularization. Objective: To determine the characteristics of patients treated with amniotic membrane transplantation.

#### Method

This study design was a cross sectional study with total sampling. The population in this study were all patients treated with amniotic transplantation at Mencirim 77 Eye Hospital in May to December 2019 and the data was analyzed by SPSS.

#### Result

There were 13 subjects included in this study. 11 subjects were males and 2 subjects were females with the average age of 40,2 years. Based on the analyzed result, the most common presenting symptom was blur vision (92,3%). The majority of patients present with decreased visual acuity which categorized as blindness (92,3%). The most common predisposing factor were ocular trauma (84,6%), keratitis ulcerative (76,9%) and using traditional medicine (46,2%).

#### Conclusion

From the result of this study, it can be concluded that males contributes of all patients treated with amnion transplantation. Most patients came with symptoms of decreased vision and poor visual function. The most common predisposing factor was ocular trauma.

#### Keyword

Amnion, Characteristics

#### Category

Free Paper Presentation

#### Latest Update

July 21, 2020

#### Status

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### FP-IIM-03

## THE EFFECTS OF ORAL COMBINED CONTRACEPTIVE PILL ON CONJUNCTIVAL IMPRESSION CYTOLOGY

#### Abstract Title

THE EFFECTS OF ORAL COMBINED CONTRACEPTIVE PILL ON CONJUNCTIVAL IMPRESSION CYTOLOGY

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#### Abstract Type

Research

#### Introduction & Objective

Oral combined contraceptive (OCC) pill is one of therapy that can be associated with ocular surface changes. This changes can be examined by conjunctival impression cytology (CIC). This study was purposed to see the effects of OCC pill on the CIC changes.

#### Method

This is a cross-sectional study conducted in March 2019 at Puskesmas Sukajadi Bandung, 40 female aged 21-40 years old were enrolled, divided into 2 groups with age, parity and Body Mass Index (BMI) matching. Group A consist of those on OCC pill for 1-12 months (n=20) and group B (control) group (n=20). CIC was performed to assess goblet cell density and conjunctival epithelial cell methaplasia. Tear break up time (TBUT), Schirmer-1, ocular surface disease index (OSDI) score were also performed. Shapiro-wilk analysis was used to evaluate the data normality. The goblet cell density and the degree of conjunctival epithelial cell methaplasia were calculated using Mann-Whitney. The result was statistically significant if p

#### Result

The mean age of the participants was 32.80 years SD(3.80) in group A and 32.75 years SD(3.71) in group B. Most of the participants were with parity 2 (45%) participants with the mean BMI 22.03 SD(1.71) in group A, while in group B: parity 2 (55%), mean BMI 21.89 SD(1.40). The results showed no difference in goblet cell density (p=0.841) and the degree of conjunctival epithelial cell methaplasia (p=0.947) between the two groups. However, TBUT, Schirmer-1 test, and OSDI score were different between groups (p

#### Conclusion

There were no different in CIC changes in both groups.

#### Keyword

contraceptive pill, ocular surface disease, conjunctival impression cytology

#### Category

Free Paper Presentation

#### Latest Update

August 05, 2020

#### Status

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### FP-IIM-04

## CLINICAL CHARACTERISTICS AND MANAGEMENT OF CYTOMEGALOVIRUS RETINITIS WITH HIV IN CICENDO EYE HOSPITAL NATIONAL EYE CENTER, BANDUNG

#### Abstract Title

CLINICAL CHARACTERISTICS AND MANAGEMENT OF CYTOMEGALOVIRUS RETINITIS WITH HIV IN CICENDO EYE HOSPITAL NATIONAL EYE CENTER, BANDUNG

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#### Abstract Type

Research

#### Introduction & Objective

Cytomegalovirus (CMV) is a major morbidity and mortality in patients with HIV. CMV retinitis is the most common ophthalmic manifestation that can occur in 15-40% of patients related to HIV and demands aggressive treatment to prevent a severe visual loss. This study aims to describe clinical characteristics and management CMV Retinitis with HIV in Cicendo Eye Hospital, Bandung.

#### Method

This was a retrospective study which data was obtain from 24 patient's medical records who diagnosed CMV Retinitis with HIV and received injection intravitreal Ganciclovir from April 2015 to December 2017.

#### Result

The mean age was 38,3 years, 19 patients (79,1%) were male and 5 patients (20,8%) were female. All patients were HIV positive and had antiretroviral therapy since diagnosed with HIV. Tuberculosis was the most common other opportunistic infection in our patients. Twenty patients (31 eyes) underwent intravitreal injection of Ganciclovir confirmed with the condition of each eye.

#### Conclusion

The patients in this study mostly underwent with longstanding antiretroviral therapy. The various of clinical manifestation findings have implications for the management of the diseases and periodic screening after diagnosis of HIV.

#### Keyword

CMV retinitis, HIV, ganciclovir

#### Category

Free Paper Presentation

#### Latest Update

August 13, 2020

#### Status

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## FP-IIM-05

### Correlation of Pterygium and Meibomian Gland Dysfunction

#### Abstract Title

Correlation of Pterygium and Meibomian Gland Dysfunction

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#### Abstract Type

Research

#### Introduction & Objective

Pterygium and Meibomian Gland Dysfunction (MGD) are conditions that can lead to ocular discomfort and dry eye. The purpose of this study was to assess changes of ocular surface and meibomian gland in pterygium and to know the correlation of pterygium and meibomian gland dysfunction.

#### Method

This study was a cross-sectional study conducted in Educational Hospital of Hasanuddin University from December 2018 to February 2019. Samples were assessed for Tear Meniscus Height (TMH), Ocular Surface Disease Index (OSDI), Non-Invasive Keratograph Break Up Time (NIK BUT, meiboscore using meibography and the expression of meibomian glands using meibum score.

#### Result

From 69 samples (42 samples (60.9%) female and 27 samples (39.1%) male). 34 samples (49.3%) presented with stage 1 pterygium and only 7 samples presented with stage 3 (10,1%). Besides TMH, other parameters: OSDI, NIK BUT, meiboscore and meibum score tended to increase along with the increasing of the pterygium degree (r towards +1 and p value

#### Conclusion

Alteration of ocular surface and meibomian gland in pterygium suggest a significant correlation between pterygium and meibomian gland dysfunction.

#### Keyword

pterygium, meibomian gland dysfunction, meiboscore

#### Category

Free Paper Presentation

#### Latest Update

August 14, 2020

#### Status

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## FP-IIM-06

### ASSOCIATION BETWEEN PROLONGED USE OF SMARTPHONE AND THE INCIDENCE OF DRY EYE AMONG JUNIOR HIGH SCHOOL STUDENTS

#### Abstract Title

ASSOCIATION BETWEEN PROLONGED USE OF SMARTPHONE AND THE INCIDENCE OF DRY EYE AMONG JUNIOR HIGH SCHOOL STUDENTS

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#### Abstract Type

Research

#### Introduction & Objective

The activity where children maintain to stay focused on an object that they see on the screen of smartphone for long periode of time, can lead any ocular discomfort. This study aims to investigate the association between prolonged use of smartphone and the incidence of dry eye among adolescents.

#### Method

A cross sectional study was performed among junior high school students in Makassar. Of 143 students within the age of 12-16 years old, 74 were those with over three-hour use of smartphone, while 69 spent less than or equal to three hours. Ocular Surface Disease Index (OSDI) questionnaire was performed, followed by blink rate, Tear Break Up Time (TBUT), Tear Meniscus Height (TMH) examinations, and Schirmer test. Pearson's correlation, Independent-t and Chi Square tests were employed for data analysis.

#### Result

There was a significant association between the prolonged use of smartphone and dry eye incidence as specified by OSDI score (p

#### Conclusion

The prolonged use of smartphone was strongly associated with adolescent DED. Therefore, parental advisory upon the smartphone use among adolescents is necessary to prevent the detrimental effects.

#### Keyword

Dry eye, Smartphone use, Dry eye in adolescents

#### Category

Free Paper Presentation

#### Latest Update

August 14, 2020

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## FP-IIM-07

### COMPARISON EFFICACY OF THE ADMINISTRATION OF TRIAMCINOLONE 20 MG AND BEVACIZUMAB 2.5 MG SUBCONJUNCTIVAL INJECTION ON THE LEVEL EXPRESSION OF mRNA OF VEGF, MMP-1 AND IL-1 IN PTERYGIUM PATIENTS

#### Abstract Title

COMPARISON EFFICACY OF THE ADMINISTRATION OF TRIAMCINOLONE 20 MG AND BEVACIZUMAB 2.5 MG SUBCONJUNCTIVAL INJECTION ON THE LEVEL EXPRESSION OF mRNA OF VEGF, MMP-1 AND IL-1 IN PTERYGIUM PATIENTS

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#### Abstract Type

Research

#### Introduction & Objective

Pterygium is a fibrovascular mass that growth from conjungtiva into the cornea. Inflammation process in conjungtiva is one of factor that involve in recurrency process in pterygium. The effect of subconjunctival injection of triamcinolone and bevacizumab in pterygium have been studied. This study aimed to analyze the effectiveness of injecting Triamcinolone 20 mg subconjunctival and Bevacizumab 2.5 mg subconjunctival on the level of mRNA expression of Vascular Endothelial Growth Factor (VEGF), Metalloproteinase-1 (MMP-1) and Interleukin-1 (IL-1) in pterygium patients and assessing the protective effect of these injection against the risk of postoperative recurrence

#### Method

Fifteen eyes from 15 patients with primary pterygium stage II were divided into three groups; each group was given a 20 mg subconjunctival injection of Triamcinolone, or a 2.5 mg subconjunctival injection of Bevacizumab or placebo, which was given 1 week before excision surgery; excision surgery was performed with autograft conjunctival technique. Blood samples were taken before and 1 month postoperatively, and also the pterygium tissues were taken for examination of VEGF, MMP-1 and IL-1 mRNA expression with realtime PCR techniques.

#### Result

The mean age of the patients was  $38 \pm 4.99$  years old, out of 15 patients. There was improvement in vision in the Bevacizumab group, but it was not statistically significant ( $p = 0.50$ ). Postoperatively, the expression of VEGF, MMP-1 and IL-1 mRNA increased in all three groups. The highest expression before and after injection of VEGF mRNA was in the Triamcinolone group ( $11.516 \pm 0.959$ ,  $p = 0.001$  vs  $7.571 \pm 0.786$ ,  $p = 0.541$ ), the highest MMP-1 mRNA expression was in the Triamcinolone group ( $11.717 \pm 2.291$ ,  $p = 0.078$  vs  $8,193 \pm 0.739$ ,  $p = 0.998$ ) and the highest IL-1 mRNA expression was in the Triamcinolone group ( $12.900 \pm 0.602$ ,  $p = 0.017$  vs  $9.494 \pm 2.057$ ,  $p = 0.078$ ). In the tissue samples of VEGF, MMP-1 and IL-1 mRNA expression, high results were obtained in the triamcinolone group, but not statistically significant. There are correlation between clinical signs after excision and the decrease of mRNA VEGF, MMP-1 and IL-1, in which recurrence risk is highest in the placebo group.

#### Conclusion

The administration of 20 mg subconjunctival injection of Triamcinolone before surgery is effective in preventing recurrence in pterygium patients.

#### Keyword

Pterygium, Triamcinolone, Bevacizumab, mRNA VEGF, mRNA MMP-1, mRNA IL-1

**Category** Free Paper Presentation

**Latest Update** August 15, 2020

**Status** Submitted

## FP-IIM-08

### COVID-19 AND ITS POTENTIAL OCULAR TRANSMISSION AND DIAGNOSTIC TOOL : A SYSTEMATIC REVIEW

#### Abstract Title

COVID-19 AND ITS POTENTIAL OCULAR TRANSMISSION AND DIAGNOSTIC TOOL : A SYSTEMATIC REVIEW

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#### Abstract Type

Research

#### Introduction & Objective

Coronavirus disease-2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), has been proposed that it can be transmitted via conjunctival secretions. There are still limited studies regarding this issue especially systematic review and meta-analysis. The objective of this meta-analysis was to discuss about the ocular transmission of COVID-19 and its tear/conjunctival secretion as potential sample for reverse transcription-polymerase chain reaction (RT-PCR) test.

#### Method

Meta-analysis was conducted throughout Cochrane and PubMed from 2019-2020. Keywords were "COVID-19" and "transmission" and "swab" and "PCR". Inclusion criteria were full-text observational articles stating ocular COVID-19 transmission and RT-PCR positivity using conjunctival secretions as sample test. Review, letters, and editorials, non-Bahasa or -English articles were excluded, total 10 studies were eligible for this study.

#### Result

The pooled proportion of conjunctival/tear sample that was positive for the virus (RT-PCR detection of SARS-CoV-2) was found to be 4.492% (95% C.I. 2.143-7.649) among all 540 nasopharyngeal RT-PCR-confirmed patients. The pooled proportion had wide heterogeneity ( $I^2 = 0.56$  and  $1$ ,  $p < 0.05$ ) so random effect model was used.

#### Conclusion

The positivity of SARS-CoV-2 in tear/conjunctival secretion RT-PCR test was low and it still remains unclear about the ocular transmission. It still needs more multicenter and long-term period researches in the future to get better understanding, yet, the prevention of transmission through an ocular surface and personal protective equipment (PPE) remains mandatory.

#### Keyword

COVID-19, transmission, diagnostic, ocular

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

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## FP-IIM-09

### Ocular Surface Disease Symptoms Among Motorcycle Taxi Drivers in Indonesia: A Cross-Sectional Study

#### Abstract Title

Ocular Surface Disease Symptoms Among Motorcycle Taxi Drivers in Indonesia: A Cross-Sectional Study

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#### Abstract Type

Research

#### Introduction & Objective

The rise of motorized vehicles has led to increased levels of air pollution. Air pollution can cause various health problems, including ocular surface diseases. As motorcycle taxi drivers spend most of their time outdoors, they are individuals prone to air pollution related disorders. This study aims to investigate the association of chronic long-term environmental air pollutants on the magnitude of ocular surface disease symptoms, experienced by motorcycle taxi drivers in Indonesia.

#### Method

This is a cross-sectional study carried out among motorcycle taxi drivers in Indonesia. Ocular surface disease index (OSDI) questionnaires were filled out online to assess subjective symptoms and severity of the disease, while sociodemographic details of participants were also requested to assess risk factors. Statistical analysis was done using SPSS.

#### Result

A total of 101 motorcycle taxi drivers completed the survey. The mean OSDI score was  $27.84 \pm 15.27$  (range 8.33-72.9). Based on OSDI score, 68.3% of participants reported symptoms of ocular surface disorder. There was a statistically significant association between the severity of ocular surface disease with daily hours of work ( $p=0.025$ ). A significant mean difference of OSDI score in drivers wearing different types of helmet was also observed ( $p=0.041$ ).

#### Conclusion

Duration of working and type of helmet appear to be significantly correlated to the severity of ocular surface disorder symptoms in motorcycle taxi drivers population. However, the interpretation of this study results was limited in the context of online survey research.

#### Keyword

ocular surface disease, ocular surface disease index, motorcycle drivers

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## FP-IIM-10

### Cataract surgery in the setting of uveitis: clinical characteristics and surgical outcomes of 79 eyes

#### Abstract Title

Cataract surgery in the setting of uveitis: clinical characteristics and surgical outcomes of 79 eyes

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#### Abstract Type

Research

#### Introduction & Objective

Cataract is the most common complication in uveitis caused by chronic inflammation or prolonged corticosteroids exposure. Patients with uveitis challenged the surgeon in some ways, as they are more likely to present with anatomical abnormalities, complicated cataracts, and a higher complication rate intra and postoperative. The purpose of this study is to evaluate the clinical characteristic and surgical outcomes of cataract surgery in uveitis patients.

#### Method

This is a retrospective review of medical records of 79 eyes from 64 patients from January 2016 until December 2017 in Kirana Cipto Mangunkusumo General Hospital.

#### Result

Seventy-nine eyes (64 patients) were included. Within 64 patients, uveitis was found more in female than male (54,7% vs 45,3%). Infectious uveitis is the most common etiology found in this study (36 eyes), followed by non-infectious uveitis (31 eyes). Tuberculosis is the main cause of infectious uveitis while Behçet disease is the main cause of noninfectious uveitis. More than half of the patients (54%) underwent phacoemulsification with intraocular lens insertion and most of them received preoperative prophylaxis corticosteroids for one to twelve weeks. Best corrected visual acuity following cataract surgery was statistically significant improved. Recurrence rate was higher in infectious uveitis ( $p < 0,05$ ).

#### Conclusion

Most of the patients with uveitis achieved improved visual acuity after cataract surgery and phacoemulsification is the most common surgical approach in uveitis patients. Preoperative prophylaxis corticosteroid is recommended in all type of uveitis to reduce complication and recurrence. Identifying the etiology should help in predicting the recurrence rate post-operative.

#### Keyword

uveitis, cataract surgery, outcomes

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

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## FP-IIM-11

### THE EYE: COVID-19 TRANSMISSION ROUTE?

#### Abstract Title

THE EYE: COVID-19 TRANSMISSION ROUTE?

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#### Abstract Type

#### Research

#### Introduction & Objective

Severe Acute Respiratory Syndrome Coronavirus?2 (SARS?CoV?2) first emerged in China in December 2019 and rapidly spread worldwide. It is transmitted by person?to?person contact, via airborne droplets, or through contact with contaminated surfaces. Cutting off the route of transmission is one of the most important measures in the prevention and control of infectious diseases. Whether the ocular surface is a route of transmission remains to be proved. In this article, evidence regarding ocular surface as possible transmission route of COVID-19 infection is reviewed.

#### Method

A thorough literature search was conducted on recently published studies between January 1 to July 30, 2020. PubMed, Google Scholar and Science Direct databases were searched.

#### Result

A total of 128 items were identified in the search. Seventeen articles were included in this review which encompassed 9 reviews, 8 case reports. The possible presence of viral particles in ocular tissue may indicate likelihood of the ocular surface being an infection gateway. Characteristics of SARS-CoV-2, the ocular distribution of the major SARS-CoV-2 binding protein, and the experimental and clinical evidence of the ocular transmission route were described.

#### Conclusion

Transmission through the ocular route is likely for SARS-CoV-2 but the risk of SARS-CoV-2 transmission through tears was low. Exact pathophysiology of ocular transmission of the virus remains incompletely understood.

#### Keyword

COVID-19, eye, transmission

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-IIM-12

### Tear Film Evaluation in Patients with Senile Cataract and Dry Eye After Phacoemulsification

#### Abstract Title

Tear Film Evaluation in Patients with Senile Cataract and Dry Eye After Phacoemulsification

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#### Abstract Type

Research

#### Introduction & Objective

The aim of this study was to evaluate the tear film in patients with senile Cataract and Dry Eye before and after phacoemulsification cataract surgery.

#### Method

This prospective study was done at Hasanuddin University Hospital, Makassar during three months period. Twenty samples of 10 male (50 %) and 10 female patients (50%) were included. Most of the patients aged > 60 years (70%). Subjective test for dry eye was conducted with the Ocular Surface Disease Index (OSDI) score and objective tests with Tear Meniscus Height (TMH), Non Invasive Keratograph Break Up Time (NIK BUT) and mapping area first Break Up using Keratograph 5M. The tests were performed before phacoemulsification and re-evaluated in day 7 and day 30 after phacoemulsification.

#### Result

The results of this study indicated that there was a change in the pattern of dry eye degree based on the OSDI score. There was an increase of mild and moderate dry eye, whereas for severe dry eye, most patients experienced an improvement to moderate dry eye after phacoemulsification. Based on TMH and NIK BUT test, there were no significant changes after phacoemulsification. This study also found changes in the first break up area that were not significant. The first break up area was the inferonasal area preoperatively, and the inferior as well as the inferotemporal areas postoperatively.

#### Conclusion

There is a change in the pattern of dry eye degrees based on OSDI scores. TMH examination showed no significant changes. The NIK BUT examination was found that no significant changes. And found a change in the area of the first break up after a phacoemulsification operation that is not significant.

#### Keyword

Tear Film, Senile Cataract, Dry Eye, Phacoemulsification, Keratograph

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## FP-IIM-13

### Endophthalmitis prevalence in Kariadi Hospital: A 5-Year Retrospective Study

#### Abstract Title

Endophthalmitis prevalence in Kariadi Hospital: A 5-Year Retrospective Study

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#### Abstract Type

Research

#### Introduction & Objective

Endophthalmitis is an intraocular inflammation that potentially sight-threatening. Diagnosis is clinically and supported by cultures of vitreous or aqueous and by blood cultures in some endogenous cases. Our objectives is to determine the demographics, characteristics, bacterial pattern, antibiotic susceptibility and management in different type of endophthalmitis patients in Kariadi Hospital.

#### Method

A retrospective review of medical records of patients diagnosed with endophthalmitis from July 2015 to June 2020 at Kariadi Hospital was performed. Data collected include demographic details, time of presentation, visual acuity at presentation and final, bacterial isolated, antibiotic susceptibility, type of management in different type of endophthalmitis.

#### Result

One-hundred-and-seventy-seven patients were included in the study and predominantly male (70,07%), Postoperative endophthalmitis was 54,80 %, post traumatic 22,60%, post keratitis 15,82%, endogenous 5,65% and bleb related 1,13%. The highly rate of post operative because of delay in referral. Post traumatic endophthalmitis most common in employees (6,21%) and post keratitis endophthalmitis mostly in farmers (6,21%). The earliest time of presentation was 4 weeks (10,17%) was in post keratitis. LP was predominantly found at presentation (48,02%) followed by HM (30,51%) and the most common final visual acuity after treatment was HM (23,73%) followed by 1/60-5/60 (16,95%). Pars plana vitrectomy was the predominant therapy in Endophthalmitis (70,09%). The predominant pathogen in endophthalmitis were Pseudomonas aeruginosa (6,21%) and Staphylococcus aureus (1,69%).

#### Conclusion

Post operative was the most common type of Endophthalmitis followed by post traumatic and Pseudomonas aeruginosa was the predominant pathogen of Endophthalmitis in Kariadi Hospital.

#### Keyword

endophthalmitis, bacterial pattern, Pseudomonas aeruginosa

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## FP-IIM-14

### PREVALENCE AND CLINICAL CHARACTERISTICS OF BACTERIAL CORNEAL ULCER AT KARIADI HOSPITAL SEMARANG

#### Abstract Title

PREVALENCE AND CLINICAL CHARACTERISTICS OF BACTERIAL CORNEAL ULCER AT KARIADI HOSPITAL SEMARANG

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#### Abstract Type

Research

#### Introduction & Objective

Corneal ulcers are inflammation of the cornea which is characterized by infiltrates accompanied by epithelial defects involving the corneal stroma and necrotic tissue. This disease often causes morbidity especially in developing countries and is generally considered an ophthalmological emergency. To describe demographic characteristic, predisposing factors, etiologic and antibiotic susceptibility pattern of corneal ulcer patients at ophthalmology department of Dr. Kariadi Hospital Semarang.

#### Method

All data were taken retrospectively includes all patients with bacterial corneal ulcer at Dr. Kariadi Hospital since July 2015 to June 2020. We reviewed patient's medical records and determine clinical characteristic, predisposing factors and microbiological agents isolated with antimicrobial sensitivity pattern.

#### Result

Two-hundred-and-fifty-six patients were included in the study. Majority of corneal ulcer cases were found in patient aged 51-60 (27.34%) with male (72.65%) and farmer (30.85%) predominance. Vegetative trauma was the leading cause of corneal ulcer (36.71%). Majority case presented in 4 days-1 weeks (63.67%) of onset. Visual acuity was documented 2/60-LP was predominantly found at presentation (90.2%) and after treatment (69.41%). Most cases caused 1/3 posterior stroma in (28.90%) central lesion (68.36%) with 2-6 mm size (55.86%). Surgical treatment was performed on 97 (37.89%) patient. Culture's result was present in 9 (3.51%) patient with gram-negative rod as common isolates.

#### Conclusion

Bacterial corneal ulcer was prevalence on older male farmer patient. Most cases were due to vegetative trauma, which cause 1/3 posterior stroma, central lesion with high complication rate. Surgical treatment was performed on several cases. Bacterial infection occurs on many number of cases and should be treated with fluoroquinolone,

#### Keyword

corneal ulcer, vegetative trauma, fluoroquinolone

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## FP-KBR-01

### VISUAL ACUITY IN PSEUDOPHAKIC EYES WITH POSTERIOR CAPSULE OPACIFICATION POST CAPSULOTOMY POSTERIOR USING CYSTOTOME NEEDLE AT MENCIRIM 77 EYE HOSPITAL

#### Abstract Title

VISUAL ACUITY IN PSEUDOPHAKIC EYES WITH POSTERIOR CAPSULE OPACIFICATION POST CAPSULOTOMY POSTERIOR USING CYSTOTOME NEEDLE AT MENCIRIM 77 EYE HOSPITAL

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#### Abstract Type

Research

#### Introduction & Objective

The most common complication of cataract surgery is posterior capsule opacification (PCO). PCO causes a reduction in visual acuity and contrast sensitivity, glare and monocular diplopia. The rate of Nd:YAG capsulotomy were 10.6%, 14.8%, 21.2%, 28.6% in patients after 1, 2, 3, 4 years. The incidence of PCO in Cipto Mangunkusumo Hospital Jakarta was 9.2% in 2003 AND 3 years cumulative incidence was 8.82%. Objective: To determine the characteristics of posterior capsule opacification patients and best corrected visual acuity (BCVA) after capsulotomy posterior was performed.

#### Method

This study design was a cross sectional study with total sampling. The population was all PCO patients who have been treated with capsulotomy posterior using cystotome needle in October 2019 to January 2020. BCVA was classified by WHO ICD-10. The data was analyzed by SPSS.

#### Result

There were 28 patients (14 males and 14 females) and 29 eyes in the age of 66.43 years and unilateral, Blurred vision was the symptom which most PCO patients complained in 29 eyes. PCO was more common found in oculi dextra in 16 eyes. The mean time of post-cataract surgery until diagnosed with PCO was 37.55 months. The pre-operation BCVA was  $0.14 \pm 0.31$  (moderate visual impairment). The first day post-operation BCVA was  $0.34 \pm 0.80$  (no-mild visual impairment and moderate visual impairment).

#### Conclusion

From the result of this study, it can be concluded that there was no gender difference in the incidence of PCO. Blurred vision was the symptom which most PCO patients complained. The BCVA after posterior capsulotomy is improved.

#### Keyword

Visual, Pseudophakia, PCO

#### Category

Free Paper Presentation

#### Latest Update

July 21, 2020

#### Status

Submitted

## FP-KBR-02

### COVID-19 RT PCR in Aqueous Humor Patients Underwent Phacoemulsification Procedure

#### Abstract Title

COVID-19 RT PCR in Aqueous Humor Patients Underwent Phacoemulsification Procedure

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#### Abstract Type

Research

#### Introduction & Objective

Covid-19 pandemic cause ophthalmologist having the highest risk due to close contact during examination and possible conjungtival involvement. Previous studies showed SARS-CoV2 RNA can be detected in tear film and/or conjunctival swabs although the viral load was markedly lower than in nasopharyngeal swabs or sputum. Receptor ACE-2 as cellular entry of SARS-CoV2 is only present in the retina and aqueous. Cataract operation procedure might give risk of transmission via aerosol. This study aimed to identify SARS-CoV2 RNA in humor aqueous of patients who underwent phacoemulsification with standard inclusion criteria in non pandemic period

#### Method

This is a descriptive study with cross-sectional design. The study collected humor aqueous samples from cataract patients who underwent phacoemulsification in a private hospital Jakarta, located in red zone Covid19 district, during period of May-July 2020. SARS-CoV2 RNA was examined using RT PCR. Pre operation screening to all of the patients used the standard inclusion criteria without rapid and swab test for Covid-19

#### Result

During 3 months, 93 patients were operated and 73 humor aqueous specimens were collected. About 50.5% of the patients were male with average age of 60.8 years old. SARS-CoV2 RNA were not found in 62 samples, with 9 samples showed inconclusive and 2 invalids

#### Conclusion

SARS-CoV2 RNA was not found in humor aqueous from patients who perform cataract operation with standard screening for inclusion criteria. Pre operation screening standard still possible to be used in Covid-19 pandemic if rapid or swab test is difficult to be performed as compulsory procedure before the cataract operation

#### Keyword

cataract, humor aqueous, SARS-CoV2 RNA

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

### FP-KBR-03

## SURGICAL AND VISUAL OUTCOME OF POSTERIOR POLAR CATARACT IN NATIONAL EYE CENTER CICENDO EYE HOSPITAL, INDONESIA

#### Abstract Title

SURGICAL AND VISUAL OUTCOME OF POSTERIOR POLAR CATARACT IN NATIONAL EYE CENTER CICENDO EYE HOSPITAL, INDONESIA

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#### Abstract Type

Research

#### Introduction & Objective

Posterior polar cataract is a rare form of cataract with incidence from 3 to 5 in 1000. It is bilateral in 65–80% of the cases with no gender predilection. Posterior polar cataract presents a special challenge to the surgeon because of its predisposition to posterior capsular dehiscence and possible nucleus drop during surgery. The study aims to evaluate the visual outcome and complication of cataract surgery in patients with posterior polar cataract.

#### Method

This is a descriptive study. Data were collected from the medical records within period of January 2016 – December 2018 in National Eye Center Cicendo Eye Hospital and reviewed retrospectively. Subjects in this study are patients with posterior polar cataract who underwent cataract surgery. The outcomes included visual acuity on the fourth week after surgery and complications during cataract surgery.

#### Result

There were 50 eyes of 37 patients included in the study. The mean age was  $55.22 \pm 13.86$  years. Best corrected visual outcomes (BCVA) before surgery were 6/6-6/18 in 26 eyes (52%) after surgery there were 48 eyes (96%). Complications during surgery were found in 7 eyes (14%), which was posterior capsular rupture with vitreous prolapse. Complications during phacoemulsification technique in 6 patients and 1 patient had SICS.

#### Conclusion

Posterior polar cataracts are a surgical challenge. In our study, cataract surgery in posterior polar cataract leads to good visual outcome. Appropriate treatment in patients with complications yielding good outcome.

#### Keyword

Posterior polar cataract, intraoperative complication, visual outcome

#### Category

Free Paper Presentation

#### Latest Update

August 03, 2020

#### Status

Submitted

### FP-KBR-04

## The Effect of Topical and Sitemic Antioxidant Vitamin E on Malondialdehyde Lens of Mice Exposed by Cigarette Smoke

#### Abstract Title

The Effect of Topical and Sitemic Antioxidant Vitamin E on Malondialdehyde Lens of Mice Exposed by Cigarette Smoke

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#### Abstract Type

Research

#### Introduction & Objective

Free radicals and oxidants have dual role, as substances that are harmful and beneficial to our body. The amount of excessive free radicals which cannot be destroyed will accumulate in our body resulting in a phenomenon known as oxidative stress. Cigarette smoke is one source of free radicals that can trigger an acute or chronic inflammatory and oxidative stress reaction, on the lens membrane it can cause damage to lens cells. The use of antioxidants is an effort to protect and minimize the risk of damage to body cells from free radical attacks.

#### Method

28 wistar mice were randomly divided into four groups: a control group (K), a group receiving exposure to cigarette smoke (P1), a group receiving exposure to cigarette smoke and topical antioxidants (P2), and a group receiving exposure to smoke cigarettes and systemic antioxidants (P3). Smoking exposure is by given 2 sticks of cigarettes, 2 times a day for 21 consecutive days. At the end of the study, the eyes of the mice were enucleated to measure the level of malondialdehyde lenses.

#### Result

The mean MDA level of the K group was lowest than other groups, and the P1 group had the highest. The mean MDA level in the P2 group was higher than the P3 group, but it was not statistically significant.

#### Conclusion

Exposure to cigarette smoke can cause oxidative damage in mice lens, and the use of systemic and topical antioxidant vitamin E is effective for preventing oxidative stress effect in the lens.

#### Keyword

free radicals, antioxidants, a Tocopherol, malondialdehyde

#### Category

Free Paper Presentation

#### Latest Update

August 05, 2020

#### Status

Submitted

## FP-KBR-05

### COMPARISON OF HIGHER-ORDER ABERRATIONS CHANGES AFTER FEMTOSECOND LASER-ASSISTED LASER IN SITU KERATOMILEUSIS AND SMALL INCISION LENTICULE EXTRACTION IN MILD TO MODERATE MYOPIA AND MYOPIC ASTIGMATISM

#### Abstract Title

COMPARISON OF HIGHER-ORDER ABERRATIONS CHANGES AFTER FEMTOSECOND LASER-ASSISTED LASER IN SITU KERATOMILEUSIS AND SMALL INCISION LENTICULE EXTRACTION IN MILD TO MODERATE MYOPIA AND MYOPIC ASTIGMATISM

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#### Abstract Type

Research

#### Introduction & Objective

Cornea laser vision correction is becoming a more popular option for managing refractive errors. Femtosecond laser-assisted laser in situ keratomileusis (FS-LASIK) creates corneal flap with femtosecond laser while using excimer laser to ablate the stroma. Small Incision Lenticule Extraction (SMILE) has emerged as a new choice which involves dissecting lenticule without flap creation. Both procedures changed the anterior corneal curvature and could induce higher-order aberrations (HOAs) thus altering visual performance. The aim of this study was to compare HOAs root mean square (RMS), coma, trefoil and spherical aberration (SA) after FS-LASIK dan SMILE in myopic patients.

#### Method

This was a nonrandomized matched comparison of 20 low to moderate myopic and myopic astigmatism subjects who underwent FS-LASIK and SMILE. Wavefront aberrometry in 6 mm diameter was done in 1 month postoperatively.

#### Result

There were no significant differences in preoperative clinical characteristics between FS-LASIK and SMILE with mean spherical equivalent (SE) were  $-3,40 \pm 1,491$  and  $-3,45 \pm 1,349$ , mean HOAs RMS were  $0,37 \pm 0,114$  and  $0,36 \pm 0,156$ , respectively. Postoperative HOAs RMS was significantly higher both in FS-LASIK  $0,60 \pm 0,265$  ( $p=0,016$ ) and SMILE  $0,06 \pm 0,144$  ( $p=0,001$ ). Comparison of postoperative HOAs RMS was not statistically significant between FS-LASIK ( $0,23 \pm 0,250$ ) and SMILE ( $0,23 \pm 0,140$ ), but coma was higher after SMILE ( $0,20 \pm 0,169$ ;  $p=0,280$ ) and SA was elevated in FS-LASIK ( $0,07 \pm 0,252$ ,  $p=0,715$ ).

#### Conclusion

There was no significant changes of HOAs in FS-LASIK compared with SMILE in patients with low to moderate myopic and myopic astigmatism.

#### Keyword

higher-order aberrations, femtosecond LASIK, small incision lenticule extraction

#### Category

Free Paper Presentation

**Latest Update** August 06, 2020

**Status** Submitted

## FP-KBR-06

### SAFETY AND EFFICACY OF IRIS CLAW INTRAOCULAR LENS IMPLANTATION IN APHAKIC PATIENTS

#### Abstract Title

SAFETY AND EFFICACY OF IRIS CLAW INTRAOCULAR LENS IMPLANTATION IN APHAKIC PATIENTS

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#### Abstract Type

Research

#### Introduction & Objective

Iris-claw Intraocular Lens (IOL) is one alternative to correct aphakia with inadequate capsular support. Iris-claw IOL implantation is preferred because easy implantation technique and good visual outcome. Iris-claw IOL originally designed to be fixated on anterior iris. Recently, the use of retropupillary fixation is increasing because the location is more physiologic and risk to damage corneal endothelium is less. This study aims to describe safety and efficacy of aphakic iris-claw IOL implantation

#### Method

This is a retrospective study of patients with Artisan aphakic iris-claw IOL implantation. Patients divided into prepupillary and retropupillary group. The Uncorrected Visual Acuity (UCVA), Best Corrected Visual Acuity (BCVA), Safety Index (SI), Efficacy Index (EI), and complication were recorded. The procedure is safe if SI value  $\geq 1.0$  and effective if EI value  $\geq 1.0$

#### Result

There were 54 eyes in retropupillary group and 17 eyes in prepupillary group. In prepupillary group, there were 94.11% eyes with SI  $\geq 1.0$ , mean SI was  $1.79 \pm 1.02$ , 50% of eyes with EI  $\geq 1.0$ , and mean EI was  $0.77 \pm 0.20$ . In retropupillary group, there were 96.29% eyes with SI  $\geq 1.0$ , mean SI was  $2.49 \pm 2.23$ , 74.07% of eyes with EI  $\geq 1.0$ , and mean EI was  $1.75 \pm 1.64$ . Postoperative UCVA and BCVA were improve significantly compared to preoperative visual acuity in both group (p

#### Conclusion

Both prepupillary and retropupillary iris claw IOL implantation are safe. Retropupillary fixation technique is more effective improving visual acuity.

#### Keyword

iris-claw, safety index, efficacy index

#### Category

Free Paper Presentation

#### Latest Update

August 10, 2020

#### Status

Submitted

### FP-KBR-07

## REFRACTIVE OUTCOMES DIFFERENCES AFTER PHACOEMULSIFICATION SURGERY BASED ON KERATOMETRY MEASUREMENT: AUTOKERATOMETRY, CORNEAL TOPOGRAPHY, AND PARTIAL COHERENCE INTERFEROMETRY

### Abstract Title

REFRACTIVE OUTCOMES DIFFERENCES AFTER PHACOEMULSIFICATION SURGERY BASED ON KERATOMETRY MEASUREMENT: AUTOKERATOMETRY, CORNEAL TOPOGRAPHY, AND PARTIAL COHERENCE INTERFEROMETRY

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### Abstract Type

Research

### Introduction & Objective

Autokeratometry, Corneal Topography, and Partial Coherence Interferometry (PCI) are a non-invasive method for measuring anatomical characteristics of the eye such as keratometry. The keratometry is one of the parameters that crucial to calculate intraocular lens (IOL) power before cataract surgery. The objective of this study is to compare the refractive outcomes following cataract surgery using keratometry measurement from Autokeratometry, Corneal Topography, and PCI for IOL calculation in SRK/T formula.

### Method

Design of this study was observational analytic with prospective cohort. Patients being diagnosed with immature cataract at Kariadi Hospital Semarang underwent uncomplicated phacoemulsification surgery and had three examinations before surgery, which are Autokeratometry, Corneal Topography, and PCI. Phacoemulsification surgeries were done by the same phaco surgeon. On three weeks after surgery, Best-Corrected Visual Acuity (BCVA) of patients were recorded. The deviation between Spherical Equivalent (SE) and target refraction in SRK/T formula within each group was analyzed statistically.

### Result

There were ten patients in this study, 80% were male, and 20% were female. Patients mean of age was 57.7 years old. Mean value of refractive errors deviation within Autokeratometry, Corneal Topography, and PCI were  $-1.09 \pm 0.61$  ;  $-1.05 \pm 0.59$  ;  $-1.14 \pm 0.47$  respectively. Refractive errors deviation in a patient which keratometry examination using Autokeratometry, Corneal Topography, and PCI were not a statistically significant difference (p-value: 0.93).

### Conclusion

Keratometry examination using Autokeratometry, Corneal Topography, and PCI were interchangeably in determining IOL using SRK/T formula.

### Keyword

Keratometry, Refractive errors deviation, SRK/T Formula

### Category

Free Paper Presentation

### Latest Update

August 15, 2020

### Status

Submitted

### FP-KBR-08

## LIMBAL MESENCHYMAL STEM CELL-CONDITIONED MEDIUM (LMSC-CM) ON PROLIFERATION AND MORPHOLOGY OF CORNEAL ENDOTHELIAL CELL AFTER ULTRASOUND PHACOEMULSIFICATION (Experimental Study on *Oryctolagus cuniculus*)

### Abstract Title

LIMBAL MESENCHYMAL STEM CELL-CONDITIONED MEDIUM (LMSC-CM) ON PROLIFERATION AND MORPHOLOGY OF CORNEAL ENDOTHELIAL CELL AFTER ULTRASOUND PHACOEMULSIFICATION (Experimental Study on *Oryctolagus cuniculus*)

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### Abstract Type

Research

### Introduction & Objective

Corneal endothelial damage can occur from a variety of causes including age, systemic diseases such as diabetes mellitus and surgical trauma. Human corneal endothelial cells cannot divide in vivo but store the ability to proliferate in suitable conditions. Stimulating corneal endothelial cells from phase G1 to phase S is an important step in increasing endothelial cell proliferation.

### Method

Twenty four New Zealand white rabbit eyes were randomly divided into 2 groups. Group A (12 eyes) as control and whereas Group B (12 eyes) as treatment. The control group was the group carried out endothelial phaco burn and then given intracameral BSS injection. While the treatment group was the group carried out endothelial phaco burn and then given intracameral LMSC-CM injection. The morphometric parameters was measured on day 3 with specular microscopy and the eyes were enucleated to evaluate cell proliferation shown by Ki-67 expression. The differences of morphometric parameters before and after treatment were analyzed using Wilcoxon Signed-rank test or paired t-test with 95% confidence interval (p

### Result

this study showed the amount of proliferation cells shown by Ki-67 expression in the treatment group was statistically significant higher than the control group (mean control group 1.5 vs treatment group 4.5) ( $p = 0.002$  ,  $p < 0.05$ ).

### Conclusion

LMSC-CM may promote corneal endothelial wound healing by promoting cell proliferation

### Keyword

limbal mesenchymal stem cell, conditioned medium, corneal endothelial.

### Category

Free Paper Presentation

### Latest Update

August 15, 2020

### Status

Submitted

## FP-KBR-09

### Association of Raised Intraocular Pressure and its Correlation to Number of shots after Nd: YAG Laser Posterior Capsulotomy

#### Abstract Title

Association of Raised Intraocular Pressure and its Correlation to Number of shots after Nd: YAG Laser Posterior Capsulotomy

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#### Abstract Type

Research

#### Introduction & Objective

Introduction Posterior Capsular Opacifications (PCO) is a frequent complication of cataract surgery after posterior chamber intraocular lens implantation. Nd:Yag laser capsulotomy is the treatment of choice for PCO and is known to be associated with complications like raised Intraocular Pressure (IOP), it's the most common complication from Nd:Yag laser capsulotomy. Objective To find the association between number of shots and the significant rise of intraocular pressure after Nd-YAG laser posterior capsulotomy.

#### Method

In this cross-sectional retrospective study, samples were taken from patient's medical records, who had Nd:Yag laser treatment in January 2019 - December 2019 at Dr. Kariadi Hospital Semarang, all the patients with glaucoma, uveitis and posterior segment disorder were excluded from the study. Amount of energy used and number of shots in Nd:YAG procedure was recorded. Post Nd:YAG laser IOP change was noted one week after the procedure.

#### Result

A total of 29 patients, 14 (48,3 %) males and 15 (51,7%) females, mean age of patients was 59,9±9,6 years. Pre Nd:YAG laser mean IOP was 16,9 ± 2,8 mmHg and post one week Nd:YAG laser mean IOP was 19,45 ± 3,65, mean number of shots was 41,69±22,2, mean of power was 1,99 ± 0,38. Significant correlation of rise IOP with the number of shots Nd:YAG laser delivered was found by multiple linear regression.

#### Conclusion

There is a directly association between the number of shots and the post laser significant rise of IOP after one week the procedure.

#### Keyword

Intraocular pressure rise, Nd:YAG capsulotomy, Number of shots.

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Approved As Free Paper

## FP-KBR-10

### Comparison of Intraocular Pressure before Ndyag laser and 1 week after Ndyag laser in patient with history of Diabetes Mellitus and Non Diabetes Mellitus at Dr. Kariadi Hospital

#### Abstract Title

Comparison of Intraocular Pressure before Ndyag laser and 1 week after Ndyag laser in patient with history of Diabetes Mellitus and Non Diabetes Mellitus at Dr. Kariadi Hospital

#### First Author

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#### Abstract Type

Research

#### Introduction & Objective

To compare the Intraocular Pressure (IOP) before NdYag laser and 1 week after the NdYag laser was performed in patients with a history of Diabetes Mellitus (DM) and Non-Diabetes Mellitus at Dr. Kariadi Hospital

#### Method

This study is a cross sectional research conducted at Dr. Kariadi, Semarang. Samples were taken from medical records patients who had NdYag laser treatment in January 2019 - December 2019, in the form of IOP before and 1 week after Ndyag laser and a history of DM. A total of 29 patient data were taken. Data analysis was performed by comparing the IOP before and 1 week after Ndyag laser in DM and non DM patients

#### Result

out of 29 patients, 14 patients (48.3%) were male and 15 patients (51.7%) were females. Twelve patients had a history of DM (41.4%) and seventeen patients had no history of DM (58.6%). IOP before and 1 week after laser in patients who had a history of DM had no significant value ( $p = 0.524$ , T-Test). IOP before and 1 week after laser in patients with no history of DM had a significant value ( $p < 0.001$ , T-Test).

#### Conclusion

We did not find any significant difference in the effect of IOP elevation before and 1 week post laser Ndyag in patients with a history of DM. But on the other hand, there is a significant effect in the increase in IOP before and 1 week after laser Ndyag in patients who do not have a history of DM.

#### Keyword

Ndyag Laser, Intraocular Pressure, Diabetes Mellitus

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

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### FP-KBR-11

## Correlation between Pre Operative Retinometry with Post Operative Best Corrected Visual Acuity in Cataract Patients at Kariadi Hospital Semarang

#### Abstract Title

Correlation between Pre Operative Retinometry with Post Operative Best Corrected Visual Acuity in Cataract Patients at Kariadi Hospital Semarang

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#### Abstract Type

Research

#### Introduction & Objective

Cataract is the most common degenerative eye disease characterized by lens opacification that causes visual impairment. In this condition, retinometry measurement can be useful for estimating potential post operative visual acuity, and is expected to help in determining patient's visual prognosis. Our objective is to evaluate the correlation between pre operative retinometry with post operative Best Corrected Visual Acuity (BCVA) in cataract patients.

#### Method

This is an observational analytics study of cataract patients who underwent phacoemulsification surgery in Kariadi Hospital between 1 January 2019 and 31 June 2019. All data collected retrospectively using medical records, including patient characteristics, pre operative retinometry results, pre and post operative BCVA. These data were then analyzed to evaluate the correlation and also accuracy of retinometry measurement with post operative BCVA.

#### Result

68 cases were included to this study, and there is a moderate positive correlation between pre operative retinometry result and post operative BCVA (Spearman's rho 0.383,  $p=0.0001$ ). Post operative BCVA outcome were predicted accurately using pre operative retinometry measurement in 40% of cases. While 51% of cases were predicted underestimately, and 9% of cases were predicted overestimately. Cases with retinometry  $\geq 0.5$  has a calculated positive predictive value of 89% and a negative predictive value of 35% for predicting post operative BCVA outcome  $\geq 0.5$  (normal vision on WHO criteria).

#### Conclusion

Pre operative retinometry measurement can be used to predict a good post operative BCVA in cataract patients.

#### Keyword

Retinometry, Cataract, Visual Acuity

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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### FP-KBR-12

## Comparison of Autologous Blood Coagulum (ABC) and Suture at Recurrence Rate and Graft Stability of Post Operative Primary Pterygium Using Conjunctival Autograft: A Meta-Analysis from Randomized Controlled Trial

#### Abstract Title

Comparison of Autologous Blood Coagulum (ABC) and Suture at Recurrence Rate and Graft Stability of Post Operative Primary Pterygium Using Conjunctival Autograft: A Meta-Analysis from Randomized Controlled Trial

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#### Abstract Type

Research

#### Introduction & Objective

The main challenge of pterygium management is postoperative recurrence rate. Currently, using surgical suture for conjunctival autograft fixation, which have prolongs the duration of surgery, has a risk of inflammation and infection. Recently, there are some reports about autologous blood coagulum (ABC) for fixation of a conjunctival autograft. This technique have minimal cost and minimal risk of infection. The study aimed to evaluate the postoperative recurrence rate and graft stability after using ABC and sutures.

#### Method

A systematic research was done on Pubmed, Cochrane Library, and Science Direct online databases for all relevant Randomized Controlled Trials (RCTs) up to 18 July 2020. The collected RCTs were independently screened and identified to match the inclusion criteria. The relevant data were compiled in PICO's (Population, Intervention, Control, Outcomes) format and analyzed with Review Manager 5.3 software.

#### Result

Nine RCTs involving a total of 764 patients were assessed. The primary outcome indicates that ABC significantly reduced the recurrence rate compared to sutures (RR = 0.51, 95% CI 0.27-0.28,  $p = 0.04$ ). Meanwhile, in graft stability, the suture was staticallyly better than ABC (RR = 1.82, 95% CI 1.14-2.90,  $p = 0.01$ ). As a secondary outcome, the duration of surgery was significantly shorter in ABC than sutures (MD -15.72, 95% CI -22.86 to -8.58,  $p$

#### Conclusion

In conclusion, ABC for conjunctival autograft fixation in primary pterygium was associated with lower recurrence rate and shorter duration of surgery but lower graft stability than sutures. However, further well study is still needed.

#### Keyword

Autologous blood coagulum, Conjunctival autograft, Primary pterygium

#### Category

Free Paper Presentation

#### Latest Update

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#### Status

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### FP-KBR-13

## NATRIUM DICLOFENAC EFFECT ON MATRIX METALLOPROTEINASE-3 AND COLLAGEN TYPE 1 IN ANTERIOR CAPSULE FIBROSIS MODEL IN VITRO (LABORATORY EXPERIMENTAL STUDY)

#### Abstract Title

NATRIUM DICLOFENAC EFFECT ON MATRIX METALLOPROTEINASE-3 AND COLLAGEN TYPE 1 IN ANTERIOR CAPSULE FIBROSIS MODEL IN VITRO (LABORATORY EXPERIMENTAL STUDY)

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#### Abstract Type

Research

#### Introduction & Objective

To investigate the effect of Natrium diclofenac on matrix metalloproteinase-3 (MMP-3) and type I collagen expression in posterior capsule opacification (PCO) model with fibrin reaction in vitro

#### Method

Human LEC recruited from anterior lens capsule of congenital cataract patients. The scratching technique on LEC cultures made in-vitro PCO model. HLEC culture were divided into 4 groups consist of FBS 10% control group, natrium diclofenac 30 mg/ml, 100 mg/ml, and mg/ml group. The expression of matrix metalloproteinase-3 (MMP-3) and type I collagen between groups were analyzed. The data were analyzed using Mann-Whitney and Anova test then followed by Posthoc test with significant level of p

#### Result

Natrium diclofenac 30 mg/ml ( $69.12 \pm 6.87$  pixels), natrium diclofenac 100 mg/ml ( $73.42 \pm 9.23$  pixels) and natrium diclofenac 200 mg/ml ( $74.20 \pm 6.45$  pixels) increase MMP-3 expression significantly compared with the control ( $54.79 \pm 6.04$  pixels,  $p=0.00$ ). Natrium diclofenac 30 mg/ml, 100 mg/ml and 200 mg/ml significantly decreased type I collagen ( $47.15 \pm 7.19$  pixels,  $38.12 \pm 5.25$  pixels,  $42.56 \pm 6.46$  pixels, respectively) compared with the control ( $1.01 \times 10^2$  pixels, p

#### Conclusion

Natrium diclofenac has fibrosis inhibitory effect on LEC through MMP-3 and type I collagen

#### Keyword

natrium diclofenac, human lens epithelial cell, fibrosis

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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### FP-KBR-14

## SPEED II QUESTIONNAIRE SCORES IN PREOPERATIVE CATARACT PATIENTS AT MENCIRIM 77 EYE HOSPITAL

#### Abstract Title

SPEED II QUESTIONNAIRE SCORES IN PREOPERATIVE CATARACT PATIENTS AT MENCIRIM 77 EYE HOSPITAL

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#### Abstract Type

Research

#### Introduction & Objective

Dry eye syndrome increases a significant burden on an individual including social function, work and decreases the quality of life. Dry eyes were found in 42% eyes of patients at 1 week follow-up after cataract surgery. Small incision cataract surgery (SICS) and phacoemulsification surgery can cause or aggravate dry eye and affect the dry eye test values post-operative periode upto 3 months. Objective: To determine the characteristics of dry eye and Speed II Questionnaire score in pre-operative cataract surgery patients.

#### Method

This study design was a cross sectional study with total sampling. The population was patients who underwent cataract surgery in January 2020. The SPEED II questionnaire scores was categorized into mild, moderate and severe. Best Corrected Visual Acuity (BCVA) was classified using WHO ICD-10. Hardness of the lens was categorized by Burrato Grading. The data was analyzed by SPSS.

#### Result

There were 161 subjects (70 males and 91 females) with age group  $\geq 50$  years. Pre-operative BCVA was  $0.068 \pm 0.333$ . Most of the patients suffered from blindness (94 eyes) and lens hardness grade 5 (62 eyes). Symptoms based on the SPEED II questionnaire was dryness, grittiness or scratchiness with blepharitis as risk factor in 10 subjects and in mild category (93 subjects).

#### Conclusion

From this study it can be concluded that the majority of pre-operative cataract patients were women with old age, presented with dryness, grittiness or scratchiness. The SPEED II questionnaire scores was in mild category even so the patients must be informed about the possible aggravation of dry eye symptoms.

#### Keyword

Dry Eye, SPEED II, Cataract

#### Category

Free Paper Presentation

#### Latest Update

July 21, 2020

#### Status

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### FP-OFKOM-01

## AWARENESS AND KNOWLEDGE ABOUT GLAUCOMA, ATTITUDE AND BEHAVIOUR TO GLAUCOMA SCREENING IN TEMPURAN, KARAWANG DISTRICT, WEST JAVA, INDONESIA

#### Abstract Title

AWARENESS AND KNOWLEDGE ABOUT GLAUCOMA, ATTITUDE AND BEHAVIOUR TO GLAUCOMA SCREENING IN TEMPURAN, KARAWANG DISTRICT, WEST JAVA, INDONESIA

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#### Abstract Type

Research

#### Introduction & Objective

Glaucoma is the third leading cause of blindness worldwide. Most cases are asymptomatic. Patients do not realize until vision impairment and blindness occur. Blindness due to glaucoma can be prevented with early detection and adequate treatment. Awareness and knowledge of the disease is needed to encourage community behavior to seek health facilities and perform eye examinations. This study aims to assess awareness and knowledge about glaucoma, attitude and behaviour to glaucoma screening in Tempuran, Karawang District, West Java, Indonesia.

#### Method

A cross-sectional study was conducted in patients over 50 years of age. A closed-ended questionnaire, generated after extensive literature review, was used to interview respondents. The questions focused on patient's demographic and clinical characteristics, awareness and knowledge about glaucoma, attitude and behaviour to glaucoma screening.

#### Result

A total 123 respondents were included with mean age of 59.73 +/- 7.34 years. Only 13.01% of respondents had heard about glaucoma, 2.44% had good level of knowledge and 2.44% had moderate level of knowledge. 75.61% of respondents had positive attitude, but only 2.44% had ever undergone glaucoma screening. The level of knowledge and

*behavior towards glaucoma screening has significant relationship with education level, socio-economic Status, and ownership of the disease (p < 0.005).*

#### Conclusion

Awareness and level of knowledge about glaucoma in this community is still low. This condition causes low behavior toward glaucoma screening, although some have had positive attitude. Efforts to prevent blindness due to glaucoma can be done by increasing awareness and level of knowledge in community.

#### Keyword

glaucoma, awareness, knowledge, attitude, behaviour, screening

#### Category

Free Paper Presentation

#### Latest Update

August 04, 2020

#### Status

Submitted

### FP-OFKOM-02

## KNOWLEDGE, ATTITUDE, AND PRACTICE ON DIABETIC FUNDUS EXAMINATION AMONG GENERAL PRACTITIONERS IN PUSKESMAS OF BANDUNG CITY

#### Abstract Title

KNOWLEDGE, ATTITUDE, AND PRACTICE ON DIABETIC FUNDUS EXAMINATION AMONG GENERAL PRACTITIONERS IN PUSKESMAS OF BANDUNG CITY

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#### Abstract Type

Research

#### Introduction & Objective

Introduction The prevalence of Diabetic Retinopathy (DR) and Vision Threatening Diabetic Retinopathy (VTDR) in Greater Bandung on 2017 was 24,7% and 9% respectively. It mean almost 30% DR fall into VTDR, although it could be prevented. Fundus examination in primary level of prevention is important to prevent VTDR, and potential barriers on it included knowledge, attitude, practice and related factors should be overcome. Objectives : To assess knowledge, attitude, practice (KAP) and related factors on diabetic fundus examination among GPs in Puskesmas of Bandung City.

#### Method

This was a population based cross sectional study conducted on April-June 2020, involving 115 GPs at 62 puskesmas of Bandung City who fulfilled the eligibility criteria by purposive sampling. It used self administered KAP questionnaire on diabetic fundus examination. The data were presented in descriptive and analytical explanation using Chi-square with p value of 0,05 as statistical significant result .

#### Result

The mean of knowledge and attitude on fundus examination were 70,67 (95% CI ± 3,26), 72,87 (95% CI ± 2,61) respectively, included in good criteria, but Practice was poor for 95,65% participants. Poor practice was associated significantly with no availability of direct ophthalmoscope (p= 0.00038) that can not be accessed by 98 of participants (85%). Other GPs with ophthalmoscope access still did not conduct fundus examination because of no mydriasis to dilate pupil.

#### Conclusion

Knowledge and attitude on fundus examination among GPs was good, but poor on practice. It was associated with direct ophthalmoscope and mydriasis availability. It need advocacy approach to overcome.

#### Keyword

Knowledge, attitude, practice, general practitioners, diabetic retinopathy

#### Category

Free Paper Presentation

#### Latest Update

August 02, 2020

#### Status

Submitted

### FP-OFKOM-03

## WILLINGNESS TO PAY FOR CATARACT SURGERY IN BANDUNG CITY, INDONESIA AND FACTORS INFLUENCING IT

### Abstract Title

WILLINGNESS TO PAY FOR CATARACT SURGERY IN BANDUNG CITY, INDONESIA AND FACTORS INFLUENCING IT

### Abstract Type

Research

### Introduction & Objective

Cataract is a major cause of blindness in West Java based on 2014 Rapid Assessment of Avoidable Blindness (RAAB) survey. The main barrier to cataract surgery services is cost. Problems in determining cataract surgery rates are policies that are made without taking demand into account, which is the patients' willingness to pay (WTP) and ability to pay (ATP). This study aims to identify the factors influencing WTP for cataract surgery in Bandung, Indonesia.

### Method

An analytic cross-sectional study conducted on subjects aged 50 year-old and over who live in the city of Bandung and diagnosed with senile cataract at Cicendo National Hospital, Bandung in September 2019. Data were collected by filling out biodata questionnaires, interviews, and bidding games using Q-cards.

### Result

Employment, education, income and saving funds are factors that simultaneously influence WTP for cataract surgery at 45.8%, while 54.2% are determined by unidentified other factors. Education, income, and savings funds also significantly affect the WTP partially.

### Conclusion

Employment, education, income and savings funds are factors that influence WTP for cataract surgery in patients aged 50 years and over in the city of Bandung.

### Keyword

Cataract, willingness to pay, cataract surgery

### Category

Free Paper Presentation

### FP-OFKOM-04

## OVERVIEW OF KNOWLEDGE AND AWARENESS OF DIABETES MELITUS PATIENTS ABOUT DIABETIC RETINOPATHY IN TEMPURAN SUBDISTRICT, KARAWANG DISTRICT, WEST JAWA PROVINCE

### Abstract Title

OVERVIEW OF KNOWLEDGE AND AWARENESS OF DIABETES MELITUS PATIENTS ABOUT DIABETIC RETINOPATHY IN TEMPURAN SUBDISTRICT, KARAWANG DISTRICT, WEST JAWA PROVINCE

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### Abstract Type

Research

### Introduction & Objective

Diabetic retinopathy (DR) is a major microvascular complication of diabetes melitus (DM). Increasing the level of awareness of DR among individuals with DM is an important factor for early diagnosis and management of DR. The aim of this study to assess knowledge and awareness of DR in DM patients at Tempuran, Karawang District, West Java, Indonesia.

### Method

A cross-sectional study was conducted on 57 patients with DM that undergoing first time eye examination. A closedended questionnaire, generated after extensive literature review regarding the knowledge and awareness about DR was given to the respondents.

### Result

Seventy respondents were included with mean age ( $\pm$ SD) was  $61.05 \pm 8.074$  years. Only 29 participants (50.88%) had awareness about DR and 16 (55.18%) got the information from health care professionals, 7 (24.14%) know from family or friends who had diabetes, 3 (10.34%) obtained the information from mass media, and 3 (10.34%) participants did not know. 40.4% of the respondents conceived that DM patients should visit an ophthalmologist when their vision affected, 31.6% did not know when to visit ophthalmologists, 15.8% reported they visited their ophthalmologists once a year, and 12.2% visited the ophthalmologist every 6 months.

### Conclusion

Awareness about DR in this study population was still low. This result suggests that there is an immediate necessity for health education to increase the awareness about DR and the importance of eye examination for early detection and treatment. This will decrease the burden of sight threatening complications of DR.

### Keyword

Diabetic retinopathy, Diabetes mellitus, Knowledge and Awareness

### Category

Free Paper Presentation

### Latest Update

August 07, 2020

### Status

Submitted

## FP-OFKOM-06

### KNOWLEDGE AND ATTITUDE FACTORS AMONG KINDERGARTEN AND ELEMENTARY SCHOOL TEACHERS REGARDING REFRACTIVE ERROR IN SCHOOL CHILDREN IN BATANG, JAWA TENGAH

#### Abstract Title

KNOWLEDGE AND ATTITUDE FACTORS AMONG KINDERGARTEN AND ELEMENTARY SCHOOL TEACHERS REGARDING REFRACTIVE ERROR IN SCHOOL CHILDREN IN BATANG, JAWA TENGAH

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#### Abstract Type

Research

#### Introduction & Objective

Introduction Refractive errors are the most common forms of eye disorders that result in poor vision and have severe social and economic implications if uncorrected. Uncorrected refractive error was a significant cause of blindness and the major cause of impaired vision. Current data suggests that more than 90% of people with uncorrected RE, worldwide, reside in rural and low-income countries. Teacher's knowledge about refractive error play an important role in encouraging student that can help reduce the burden of visual impairment. Objective To determine knowledge and attitude factors among kindergarten and elementary school teachers regarding refractive error in school children in Batang, Jawa Tengah.

#### Method

Cross sectional study was conducted in 30 kindergarten and elementary school teachers in Batang, Jawa Tengah using pretest and posttest questionnaire. For processing and analysis, non parametric test was used due to sample does not come from normal distribution.

#### Result

A total of 30 study objects were participated in this study with the most subjects in range 31-40 years old. Of these study participants 86,7% were women and 93,3% was Bachelor's degree. 36,7% of participant were kindergarten's teachers and the other was elementary school's teacher. P value in Wilcoxon signed ranks test of knowledge in teachers was 0,039. P value in Wilcoxon signed ranks test of attitude refractive errors in teachers was 0,342.

#### Conclusion

Knowledge of study subjects were low which needs training of teachers about to refractive errors, but attitude among teachers does not change in teachers even they have been trained.

#### Keyword

Refractive errors, knowledge, attitude, kindergarten's teachers, elementary's school teachers

#### Category

Free Paper Presentation

#### Latest Update

August 13, 2020

#### Status

Submitted

## FP-OFKOM-07

### LEVEL OF KNOWLEDGE, ATTITUDE, AND BEHAVIOR OF EYE COMPLICATION DUE TO DIABETES MELLITUS AMONG ELDERLY AT RURAL AREA IN SEMARANG

#### Abstract Title

LEVEL OF KNOWLEDGE, ATTITUDE, AND BEHAVIOR OF EYE COMPLICATION DUE TO DIABETES MELLITUS AMONG ELDERLY AT RURAL AREA IN SEMARANG

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#### Abstract Type

Research

#### Introduction & Objective

Diabetes mellitus is a chronic disease that in the long-term increases the microvascular and macrovascular degenerative complications. 1 Diabetic retinopathy is the most frequent complication of diabetes. 2 Untreated diabetic retinopathy was the major causes of blindness. If diabetic retinopathy had been detected earlier in these patients, irreversible visual impairment could have been prevented. 3 Good knowledge will improve good attitude and behavior to prevent blindness due to diabetic retinopathy. To observe level of knowledge, attitude and behavior among elderly toward eye complication due to diabetes mellitus disease at rural area in Semarang

#### Method

This study was descriptive observational with depth interview. This study was conducted in December 2019 among elderly who attended prolanis events and located at the Rowosari Primary Care Center, Gunung Pati Primary Care Center and private clinic in rural area Semarang. Inclusion criteria included old age 46 years old. There were no exclusion criteria in this study. Data was obtained by filling out a questionnaire about knowledge, attitude and behavior regarding complication of diabetes mellitus in the eye.

#### Result

There were 60 respondents and most respondents in this study were female (60%). The majority of age range from 56-65 years old (70%). Many respondents had good knowledge (53.3%), positive attitude (90%) and good behavior (66.7%).

#### Conclusion

Level of attitude and behavior of eye complication due to diabetes mellitus disease among elderly at rural area in Semarang are good, while knowledge is good enough. Health promotion and health care improvement need to be done routinely to help improve knowledge, attitude and behavior.

#### Keyword

Eye complication, diabetes mellitus, knowledge attitude and behavior

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

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## FP-OFKOM-08

### Factors Affecting Community Behavior In Conducting Eye Examination In Health Facilities

#### Abstract Title

Factors Affecting Community Behavior In Conducting Eye Examination In Health Facilities

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#### Abstract Type

Research

#### Introduction & Objective

Changes in eye health seeking behavior are needed to achieve improvements in health practice. This study aims to identify existing eye health seeking behavior and the factors that influence these behavior.

#### Method

This study was observational study with cross sectional approach. Respondents were given questionnaires and then carried out in-depth interviews, with people who attended Social Service in Kampoeng Djowo, Sekatul Village, Kendal Regency, Central Java.

#### Result

There were 49 respondents, 12.2% are male and 87.8% are female, ranging from 18-71 years. Only 38.8% have a good knowledge and 10.2% have a good behavior. Contrary that 64.3% have a good attitude regarding eye health. There were 91.8% respondents stated that eye examinations needed to be done routinely, but only 11.1% actually did routine eye examinations. The reasons are quite diverse, including lack of eye health socialization, not knowing where to do eye examinations, wrong assumption that eye examinations are expensive and not covered by health insurance, no one who can accompany to the examination site, difficulty asking permission from work or other activities.

#### Conclusion

This study found that most respondents recognized the importance of routine eye examinations in health facilities. However, various factors were known to prevent respondents from having their eyes checked. It is necessary to increase public awareness about the need and benefits of early examination at eye health facilities, through providing information and eye health education. Policies should also be encouraged to enable improvement the quality of eye health services, as well as providing more peripheral eye health centers.

#### Keyword

Eye health, eye health seeking behavior, visual disturbances

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Submitted

## FP-OFKOM-09

### THE LEVEL COMPLIANCE of JUNIOR HIGH SCHOOL STUDENTS WHO EXPERIENCE IN WEARING GLASSES AT SEMARANG

#### Abstract Title

THE LEVEL COMPLIANCE of JUNIOR HIGH SCHOOL STUDENTS WHO EXPERIENCE IN WEARING GLASSES AT SEMARANG

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#### Abstract Type

Research

#### Introduction & Objective

**Introduction : Visual impairment and blindness in Indonesia have continued to increase over time, with a prevalence**

reaching 1.5%. Refractive disorders are the 2nd leading cause of visual disturbances with a prevalence of 9.5% . The prevalence of refractive errors in the world is estimated reached 34.78%. One of the treatments for uncorrected refractive error is wearing glasses. Glasses function to help the eye achieve normal vision. Compliance to the use of glasses and regular control for the use of glasses on a regular basis can help overcome visual problems due to uncorrected refractive errors. Objective : To know level of compliance of Junior High School students who experience in wearing glasses at Semarang

#### Method

this research is descriptive study. The sample of this research was obtained were taken from respondents who were in Junior High School 16 Semarang. The data collected by questionnaire about compliance wearing glasses include when the last time control for the glasses.

#### Result

there were 34 respondents, 20.6 % are man and 79.41% are women, with the majority of age 12 years is 41,17%. base on questionnaire data 38,23% respondent have a good compliance, 41.17% respondent have a bad compliance and 9% never wearing glasses. For the compliance of routine control of wearing glasses, 29% respondent have routine control every 6 month, 24% have routine control every 1 years and 35% have routine control for more than 1 years.

#### Conclusion

level of compliance wearing glasses for the junior high school student at Semarang is not good.

#### Keyword

refraction, glasses, compliance

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Submitted

## FP-OFKOM-10

### LEVEL OF KNOWLEDGE, ATTITUDES AND BEHAVIOR THE ELDERLY ABOUT CATARACTS IN PRIMARY CARE CENTER SEMARANG

#### Abstract Title

LEVEL OF KNOWLEDGE, ATTITUDES AND BEHAVIOR THE ELDERLY ABOUT CATARACTS IN PRIMARY CARE CENTER SEMARANG

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#### Abstract Type

Research

#### Introduction & Objective

Introduction: World Health Organization (WHO) estimates the global magnitude and causes of visual impairments confirm a major opportunity for change in the lives of millions of people: 80% of all causes of visual impairment are preventable or curable. WHO estimates that in 2010 there were 285 million people visually impaired, of which 39 million were blind. Cataracts are the leading cause of blindness in middle-low income countries. Knowing about cataracts will improve good attitudes and behavior to prevent blindness due to cataracts. Objective: To determine general knowledge, attitudes and behavior the elderly about cataracts in Primary Care Center Semarang

#### Method

This research is a descriptive study. The sample was obtained from respondents who came to Gunungpati Primary Care Center, Rowosari Primary Care Center and local clinic around of Gunungpati Semarang in November 2019. The data collected by questionnaire about knowledge, attitude, and behavior about cataracts

#### Result

There were 40 respondents, 38% are men and 62% are women, with the majority of age 56-65 years is 75%. base on questionnaire data 52,50% of respondents have good knowledge, 85% of respondents have a good attitude, and 60% of respondents have poorly behavior

#### Conclusion

The results of these studies indicate that knowledge and attitudes the elderly about cataracts is good, but poor in behavior. Therefore, planning is necessary to increase public behavior by improving knowledge about visual impairment and blindness and improve health care at puskesmas to did early cataract detection and facilitate their availability.

#### Keyword

cataract, knowledge, attitude, behavior, elderly

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Submitted

## FP-OFKOM-11

### THE LEVEL OF KNOWLEDGE, ATTITUDES AND BEHAVIOR JUNIOR HIGH SCHOOL STUDENTS WEARING GLASSES ABOUT MYOPIA IN SEMARANG

#### Abstract Title

THE LEVEL OF KNOWLEDGE, ATTITUDES AND BEHAVIOR JUNIOR HIGH SCHOOL STUDENTS WEARING GLASSES ABOUT MYOPIA IN SEMARANG

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#### Abstract Type

Research

#### Introduction & Objective

Introduction: According to the 2010 estimates by the World Health Organization, nearly 285 million (4.24% of the total population) people of all ages worldwide are visually impaired. Refractive errors (myopia, hyperopia, and astigmatism) were one of the most common causes of visual impairment worldwide. The refractive errors were reported to be prevalent in >40% of students and 60% of adults. Refractive errors are one of the leading causes of visual impairment and blindness, particularly in school children. The most common refractive disorders are myopia and can affect in elementary school age, which in this age the growth will alter the orbital length. Genetic and environmental conditions are the two main factors in developing myopia in children. Objective: To determine general knowledge, attitudes, and behavior junior high school students using glasses about myopia in Semarang.

#### Method

Institution based on a descriptive study was conducted on 54 students wearing glasses in junior high school 16, Ngaliyan Semarang. The data collected by questionnaire about knowledge, attitude, and behavior about myopia.

#### Result

There were 54 respondents, 18.52% are man and 81.48% are women. Base on the questionnaire data 30% respondent have good knowledge, 33% respondent have immediate knowledge, 37% respondent have poor knowledge, 89% respondent have a good attitude, 11% respondent has an immediate attitude, 89% respondent have good behavior, and 11% respondent has an immediate behavior.

#### Conclusion

The level of knowledge in junior high school students about myopia in Semarang is poor, but the level of attitude and behavior is good.

#### Keyword

myopia, knowledge, attitude, behavior, students

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Submitted

## FP-OFKOM-12

### LEVEL OF "PETA JALAN PENANGGULANGAN GANGGUAN PENGLIHATAN" KNOWLEDGE AMONG PROFESSIONAL HEALTH WORKERS IN PRIMARY CARE CENTRE GUNUNGPATI SEMARANG

#### Abstract Title

LEVEL OF "PETA JALAN PENANGGULANGAN GANGGUAN PENGLIHATAN" KNOWLEDGE AMONG PROFESSIONAL HEALTH WORKERS IN PRIMARY CARE CENTRE GUNUNGPATI SEMARANG

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#### Abstract Type

Research

#### Introduction & Objective

Introduction Globally, at least 2.2 billion people have a vision impairment or blindness, of whom at least 1 billion have a vision impairment that could have been prevented. The leading causes of vision impairment are uncorrected refractive errors and cataracts. Peta Jalan Penanggulangan Gangguan Penglihatan di Indonesia is a blindness prevention program that is good and able to be carried out and has a direction that can help to achieve blindness problem on time and on target. Optimizing the knowledge of the health workers is necessary for the progressive realization of quality eye health services for all Indonesian people. Objective To ascertain knowledge level of professional health workers towards Peta Jalan Penanggulangan Gangguan Penglihatan di Indonesia in primary care centre Gunungpati Semarang, Jawa Tengah

#### Method

This was a descriptive study, included 21 participants of professional health workers in primary care centre Gunungpati Semarang. The knowledge about Peta Jalan Penanggulangan Gangguan Penglihatan were obtained with a pre- and posttest design. A session of corresponding educational presentation were given between the test.

#### Result

There was no significant difference between total score pre-test dan post-test ( $P=0.205$ , Wilcoxon Signed Rank). Out of 21 maximum points, the mean pre-test score was 8.7 and the mean post-test score was 9.0.

#### Conclusion

Peta Jalan Penanggulangan Gangguan Penglihatan knowledge among professional health workers in primary care centre Gunungpati Semarang was high.

#### Keyword

Peta jalan penanggulangan gangguan penglihatan, Community eye health, knowledge, health worker

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-OFKOM-13

### Prevalence of Uncorrected Refractive Error and Ready-made Spectacles Correction among Junior High School students in Denpasar

#### Abstract Title

Prevalence of Uncorrected Refractive Error and Ready-made Spectacles Correction among Junior High School students in Denpasar

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#### Abstract Type

Research

#### Introduction & Objective

It is estimated that 12.8 million children are affected visual impairment from uncorrected refractive error. There is no data on prevalence rate of uncorrected refractive error in Indonesia but study in Bandung showed among 11–15 years old children was 76.4%. Correction of refractive error using ready-made spectacles in children is less expensive than custom-made spectacles. This study aims to determine prevalence rate of uncorrected refractive error among junior high school student aged 11–13 years (grade 7).

#### Method

An analytical cross-sectional observational study based on examination results in SMPN 6 Denpasar. Refractive errors were measured using a portable autorefractor. Participants with visual acuity of 0.2 logMAR or worse underwent subjective refraction. Uncorrected refractive error was defined as improvement of at least 0.2 logMAR in best corrected visual acuity after subjective refraction.

#### Result

Total 212 students were examination completely, consists of 107 female (50.5%) and 105 male (49.5%). Overall prevalence rate of refractive error was 22.6% (95%CI: 17.1%-27.7%), meanwhile 91.7% of them with uncorrected refractive error (95%CI: 80.3%-100%). The most common of refractive error was myopia (60%). No significant difference of age and sex with refractive error. Ready-made spectacles were given to 25 students (56.8%) with uncorrected of refractive error. We referred 11 students (3.8%) for further treatment.

#### Conclusion

Uncorrected refractive error is common among students. Screening at earlier age is considered effective for detecting children with refractive error. Ready-made spectacles are an affordable choice to resolve refractive error when field screening was done.

#### Keyword

Uncorrected refractive error, ready-made spectacles, junior high school

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-OFKOM-14

### PEER-REVIEWED PUBLICATION OF ABSTRACTS PRESENTED AT THE 44<sup>TH</sup> INDONESIAN OPHTHALMOLOGY ANNUAL SCIENTIFIC MEETING

#### Abstract Title

PEER-REVIEWED PUBLICATION OF ABSTRACTS PRESENTED AT THE 44TH INDONESIAN OPHTHALMOLOGY ANNUAL SCIENTIFIC MEETING

#### First Author

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#### Co Author

-

#### Abstract Type

Research

#### Introduction & Objective

More than half research data or finding that presented as an abstract in ophthalmic scientific meeting were not published as full-text manuscript in peer-reviewed journal within 2 years. More than 300 abstract were presented annually to the Indonesian Ophthalmology Association (IOA) annual scientific meeting. There are no data regarding publication rate from ophthalmic meeting in Indonesia yet. This study aimed to investigate the publication from scientific researches presented on the 44th IOA Annual Scientific Meeting.

#### Method

Abstracts submitted in the IOA annual scientific meeting were identified and retrieved from the IOA meeting proceeding book. A thorough literature search was conducted using PubMed, Google Scholar, and Google search engine. Author

*names, Keywords and title of the abstract were used to match the IOA abstracts with published paper.*

#### Result

A total 352 abstracts presented were reviewed and 17(4,38%) abstracts was found to be match with the published paper in peer-reviewed journal. Three of them (17,65%) were published in PubMed indexed journal. The median publication time is 7 months. Title changes was found in four papers (23,53%) and author changes found in eight papers (47,06%). Glaucoma subspecialty (14,71%) and experimental design study (10,42%) have the highest rate of publication.

#### Conclusion

Less than five percent abstracts presented at IOA annual scientific meeting culminated in publication on peer-reviewed journal within one year after the submission. Author interest and motivation possibly related to the lower publication rate. Short study period could also be subject of bias. Study with longer period of time and larger sample size may be required.

#### Keyword

ophthalmic meeting, Indonesia, publication

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-OFKOM-15

### KNOWLEDGE AND AWARENESS OF GLAUCOMA IN PATIENTS WITH GLAUCOMA IN YOGYAKARTA

#### Abstract Title

KNOWLEDGE AND AWARENESS OF GLAUCOMA IN PATIENTS WITH GLAUCOMA IN YOGYAKARTA

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#### Abstract Type

Research

#### Introduction & Objective

The purpose of this study was to determine the level of knowledge and awareness of glaucoma in Yogyakarta.

#### Method

A qualitative study utilizing face-to-face semi-structured interviews to investigate the level of glaucoma awareness in Yogyakarta. Purposive, non-random sampling technique was used to recruit participants, and data was collected from 110 participants (ages 10-83 years) using semi-structured interview. The resulting data were analyzed using SPSS software and descriptive analysis.

#### Result

Of the 110 participants the education level was divided into no formal education (4,55%), low (35,45%), moderate (32,73%) and high (27,27%). It was found that majority of patients knew that the glaucoma symptoms might not be noticeable (90,91%). Eighty nine patients (80,91%) knew that glaucoma could be controlled. Only 4 patients (3,64%) knew that glaucoma was not only caused by increased eye pressure, and 90 patients (81,82%) did not know that the glaucoma symptoms were not only eye pain. Thirty six patients (32,73%) knew that vision loss due to glaucoma cannot be cured.

#### Conclusion

Most of the population already understand that glaucoma occurs frequently, often might not be noticeable and can be controlled. However, there are some knowledge regarding glaucoma that are not yet understood in this population, such as risk factors for gender and age, causes, symptoms, examination and outcome of treatment.

#### Keyword

Glaucoma, Patient's Knowledge

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Submitted

## FP-OFKOM-16

### TRENDS IN OPHTHALMOLOGY PATIENT'S VISIT IN SANGLAH HOSPITAL BALI DURING CORONAVIRUS DISEASE-19 PANDEMIC

#### Abstract Title

TRENDS IN OPHTHALMOLOGY PATIENT'S VISIT IN SANGLAH HOSPITAL BALI DURING CORONAVIRUS DISEASE-19 PANDEMIC

#### First Author

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#### Author Institution

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#### Abstract Type

Research

#### Introduction & Objective

Patient's visit during COVID-19 pandemic has dramatically changed. Ambulatory and emergency services at Sanglah Hospital showed decreased number in patient's visit during March- July 2020. We evaluate the trends of patient's visit in emergency department and polyclinic setting to create the best possible method applied in giving ophthalmology services.

#### Method

It is a retrospective- cross sectional descriptive study. The data were collected from medical reports of emergency and outpatient visits to Sanglah Hospital during March-July 2020.

#### Result

Of the 156 cases at emergency department, 82% were male. Most of them (87,8%) came with ocular trauma. Five most cases were foreign body (24,36%), chemical trauma (12,82%), conjunctival rupture (6,41%), corneal rupture (5,13%), canalicular rupture (5,13%). About 18,2% cases underwent emergency surgery. Polyclinic service noted a change in trend where visits of patients with pseudophakia decreased (23,02% on March to 9,72% on April), replaced by visits of patients with other diseases such as glaucoma (6,94% on April to 14,67% on May) , diabetic retinopathy (11,88% on March to 27,41% on July), and corneal ulcers (11,39% on March to 21,83% on July).

#### Conclusion

Most of cases that came to emergency department during this pandemic were ocular trauma cases, some of them needs immediate treatment. Despite there is a decrease in the number of patient visits and changes in the trend of disease cases, health providers still need to considerate many alternatives in attempt to give the best service during this pandemic.

#### Keyword

COVID-19, emergency, polyclinic

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Submitted

## FP-OFKOM-17

### Prevalence and Risk Factors of Visual Impairment in Indonesian Elderly Population: A Multicenter Study

#### Abstract Title

Prevalence and Risk Factors of Visual Impairment in Indonesian Elderly Population: A Multicenter Study

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#### Abstract Type

Research

#### Introduction & Objective

Visual impairment is a condition that commonly affects the elderly population and is associated with disability and poor quality of life. This study aims to investigate the prevalence and associated risk factors of visual impairment in elderly population in Indonesia.

#### Method

This is a cross-sectional, multicenter study, conducted from July to September 2019 in five health centers all over Indonesia. Data was obtained through questionnaire-filling and simple ophthalmologic examination. Statistical analysis was performed using SPSS.

#### Result

A total of 127 participants were enrolled in the study. The mean age of the participants was  $66,9 \pm 6.20$  years old. Almost half of the participants suffered moderate visual impairment (40,9%). The most common primary ocular diagnosis was cataract, comprising 76,4% of the study population. There was a statistically significant association between the severity of visual impairment and level of education ( $p = 0,000$ ), as well as the severity of visual impairment with level of income ( $p = 0,001$ ). Cataract resulted in mild to moderate visual impairment in 44% of participants, and it had a statistically significant association with visual impairment in this study population ( $p = 0,008$ ).

#### Conclusion

Sociodemographic factors, namely level of education and income, are associated with the severity of visual impairment in Indonesian elderly population. A regular screening, effective and comprehensible education, and timely intervention may aid in preventing avoidable vision loss and increase quality of life.

#### Keyword

Elderly population, sociodemographic factors, visual impairment

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-OFKOM-18

### Teleophthalmology Service During COVID-19 Outbreak in Indonesia: Initial Reports

#### Abstract Title

Teleophthalmology Service During COVID-19 Outbreak in Indonesia: Initial Reports

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#### Abstract Type

Research

#### Introduction & Objective

Due to difficulties in attending direct patient care and to limit the spread of the COVID-19, Indonesian ministry of health encourages hospitals to establish telemedicine service. This study was aimed to report the initial practice of real time teleophthalmology practice during COVID-19 pandemic in Indonesia.

#### Method

This retrospective descriptive analytical study collected data of patients who had teleophthalmology consultation within 3 months period (April 27 – July 27, 2020). All consecutive patients were included in this study, except those with incomplete records. Patients' demographics, main reason for the consultation, working diagnosis, prescribed medication, management plan, and satisfaction survey were collected for the analysis.

#### Result

There were 251 video consultations from 206 patients with 4 patients (1.9%) excluded due to incomplete medical records. There were 52 (25.7%) new patients. The median number of consultations was 2 (1-8) each day. Median age was 43.5 (from

#### Conclusion

Real-time teleophthalmology consultation seemed to be well-accepted by our patients during COVID-19 outbreak, despite its early adoption.

#### Keyword

telemedicine; teleophthalmology; real time teleophthalmology; COVID-19, Indonesia

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-VR-01

### Correlation of HbA1C Levels with Pupillary Response to Apraclonidine 0,5% Eye Drops in Patients with Type 2 Diabetes Mellitus.

#### Abstract Title

Correlation of HbA1C Levels with Pupillary Response to Apraclonidine 0,5% Eye Drops in Patients with Type 2 Diabetes Mellitus.

#### First Author

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#### Co Author

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#### Abstract Type

Research

#### Introduction & Objective

Pupillary response is associated as a general indication of autonomic neuropathy disorders in DM patients. Apraclonidine as an ophthalmic sympathomimetic agent can cause mydriasis, which is likely to identify pupillary sympathetic denervation in type 2 DM patients. Study aimed to find out the correlation between HbA1c levels and pupillary response to 0.5% Apraclonidine eye drops in DM type 2 Hospital patients Mohammad Hoesin Palembang.

#### Method

Observational research with a correlation test design to investigate the correlation of HbA1c levels with pupillary response to apraclonidine 0.5% eye drops in patients with type 2 diabetes mellitus has been conducted from March to May 2019. The study sample met the inclusion and exclusion criteria of 31 diabetics mellitus type 2 with HbA1c level > 6.5% in the Eye clinic at the Mohammad Hoesin Palembang hospital.

#### Result

: In this study 31 patients with type 2 DM with HbA1c levels > 6.5 mg% were obtained. The average HbA1c level was  $9.5 \pm 1.4$  mg%, which ranged from 7.6 - 12.6 mg%. There were 9 (29.0%) eyes that did not show any changes. Significant enlargement of pupillary size after dropping 0.5% apraclonidine ( $p = 0,000$ ). This change in pupil size correlated with the estimated duration of DM ( $r = 0.436$ ,  $p = 0.014$ ) and HbA1c levels ( $r = 0.492$ ,  $p = 0.005$ ).

#### Conclusion

Pupil size after using 0.5% apraclonidine has a distribution value of 4 (3-6) mm can be interpreted that there are subjects who have no change, but there are patients who have pupils dilated to 6 mm.

#### Keyword

Pupillary response, Diabetes Mellitus complication, HbA1c

#### Category

Free Paper Presentation

#### Latest Update

August 03, 2020

#### Status

Submitted

## FP-VR-02

### CORRELATION BETWEEN KNOWLEDGE AND ATTITUDE WITH THE PRACTICE OF GENERAL PRACTITIONERS REGARDING DIABETIC RETINOPATHY IN PRIMARY HEALTH CARE IN BANDUNG

#### Abstract Title

CORRELATION BETWEEN KNOWLEDGE AND ATTITUDE WITH THE PRACTICE OF GENERAL PRACTITIONERS REGARDING DIABETIC RETINOPATHY IN PRIMARY HEALTH CARE IN BANDUNG

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#### Abstract Type

Research

#### Introduction & Objective

Visual impairment and blindness due to diabetic retinopathy (DR) can be prevented by early detection and prompt management. The role of general practitioners (GPs) as the spearhead in primary health care is very important. The application of DR early detection program activities requires knowledge, attitudes, and behavior of GPs who support the implementation of the program. This study aims to analyze the correlation between knowledge and attitudes with the practices of general practitioners regarding DR in Primary Health Centers (PHCs) in Bandung.

#### Method

An analytic observational cross-sectional study conducted to general practitioners at the PHCs in Bandung. General practitioners participated in self-filling questionnaires of knowledge, attitude, and practice regarding diabetic retinopathy. An assessment of the level of knowledge, attitudes, and practices of GPs regarding DR and a Spearman's correlation analysis test between knowledge and practice, and between attitudes and practice were done.

#### Result

Of the 115 GPs in this study, 98 (85.2%) had good levels of knowledge, 115 (100%) had positive attitudes, and 32% had good practice. Spearman's correlation test obtained a positive correlation ( $r = 0.178$ ,  $p$ -value = 0.057) between knowledge and practice, and negative correlation ( $r = -0.009$ ,  $p$ -value = 0.927) between attitude and practice. Both correlations were not statistically significant.

#### Conclusion

There are no statistically significant correlation between knowledge and practice, and between attitude and practice. Other factors beyond knowledge and attitudes that influence general practitioners' practice towards diabetic retinopathy need to be further evaluated.

#### Keyword

Knowledge attitude practice (KAP), General practitioner, Diabetic retinopathy

#### Category

Free Paper Presentation

#### Latest Update

August 05, 2020

#### Status

Approved As Free Paper

## FP-VR-03

### Spectral Domain Optical Coherence Tomography (SD-OCT) Biomarker for Visual Prognostics Following Bevacizumab Intravitreal Injection for Macula Edema Related to Retinal Vein Occlusion

#### Abstract Title

Spectral Domain Optical Coherence Tomography (SD-OCT) Biomarker for Visual Prognostics Following Bevacizumab Intravitreal Injection for Macula Edema Related to Retinal Vein Occlusion

#### First Author

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#### Abstract Type

Research

#### Introduction & Objective

To evaluate the baseline SD-OCT characteristics of macular edema (ME) due to retinal vein occlusion for visual outcome after intravitreal bevacizumab (IVB) injection.

#### Method

This retrospective study included 36 treatment-naïve eyes with ME due to CRVO (22 eyes) and BRVO (14 eyes), who were treated with minimum of three monthly IVB injection. Baseline SD-OCT images were assessed for (1) central macular thickness (CMT); (2) presence of vitreomacular adhesion or traction, and epiretinal membrane; (3) presence of intraretinal fluid or subretinal fluid; (4) presence and amount of hyperreflective spot; (5) disorganization of retinal inner layers (DRIL); and (6) disruption of external limiting membrane (ELM) and ellipsoid zone (EZ). Univariate and multivariate regression analyses were performed to evaluate the association of these features with final best corrected visual acuity (BCVA) after treatment.

#### Result

Mean BCVA improved from  $1.15 \pm 0.42$  logMAR to  $0.80 \pm 0.55$  logMAR ( $p$

#### Conclusion

Specific SD-OCT characteristic can be helpful in predicting the final visual outcome following monthly intravitreal bevacizumab injection.

#### Keyword

Branch retinal vein occlusion, central retinal vein occlusion, SD-OCT Biomarker, bevacizumab

#### Category

Free Paper Presentation

#### Latest Update

August 08, 2020

#### Status

Submitted

### FP-VR-04

## INFLUENCE OF INTERNAL AND EXTERNAL FACTORS ON THE PRACTICE OF GENERAL PRACTITIONERS REGARDING EARLY DETECTION PROGRAM IN PRIMARY HEALTH CARE FOR DIABETIC RETINOPATHY IN BANDUNG

### Abstract Title

INFLUENCE OF INTERNAL AND EXTERNAL FACTORS ON THE PRACTICE OF GENERAL PRACTITIONERS REGARDING EARLY DETECTION PROGRAM IN PRIMARY HEALTH CARE FOR DIABETIC RETINOPATHY IN BANDUNG

### First Author

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### Abstract Type

Research

### Introduction & Objective

Visual impairment and blindness that caused by diabetic retinopathy can be prevented or delayed the progression by early detection and treatment, there for early detection of diabetic retinopathy at the primary service level is important. The practice of general practitioners towards early detection of diabetic retinopathy (DR) greatly influences the sustainability of existing programs. There are internal and external factors that can influence the practice of general practitioners towards early detection of DR. To find out whether internal and external factor influence the practice of general practitioners towards DR detection program.

### Method

An analytic observational cross-sectional study conducted for a general practitioner at the primary health care in Bandung in May 2020. General practitioners who were willing to fill out participated in self-filling questionnaires of knowledge, attitude, practice regarding diabetic retinopathy as well as additional information needed. Bivariate and multivariate analyzes were carried out a description of each variable. Good practice is said if the score is > 50% and poorly said if the score is < 50%.

### Result

There were 115 general practitioners with 37.22% score of practice, included in the poor category. After analyzing the test, it was found that only the availability of means of examination that affected the practice of general practitioners towards the DR early detection program ( $p = 0.025$ ) and  $b = 1.181$ .

### Conclusion

The availability of funduscopy examination facilities is considered statistically influential.

### Keyword

diabetic retinopathy, general practitioner, practice

### Category

Free Paper Presentation

### Latest Update

August 09, 2020

### Status

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### FP-VR-05

## THE EFFECT OF MELON SUPEROXIDE DISMUTASE-GLIADIN, METHYLPREDNISOLONE, AND COMBINATION OF BOTH ON RETINAL GANGLION CELL DENSITY IN RATS MODEL TRAUMATIC OPTIC NEUROPATHY

### Abstract Title

THE EFFECT OF MELON SUPEROXIDE DISMUTASE-GLIADIN, METHYLPREDNISOLONE, AND COMBINATION OF BOTH ON RETINAL GANGLION CELL DENSITY IN RATS MODEL TRAUMATIC OPTIC NEUROPATHY

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### Abstract Type

Research

### Introduction & Objective

Trauma to the optic nerve can cause retinal ganglion cell (RGC) damage and permanent visual impairment. Methylprednisolone is the mainstay treatment with an antiinflammatory and antioxidant effect, although its effectiveness is still debatable. Melon superoxide dismutase (SOD)-gliadin is a potent antioxidant that can reduce oxidative stress and prevent further cell death. It is hoped that treatment with the combination of the two drugs can play a better role in preventing secondary degeneration of RGC compared to single given treatment. The purpose of this study was to compare RGC density in rats model optic nerve trauma treated with methylprednisolone, melon SOD-gliadin, and combination of both.

### Method

This animal experimental study was conducted on 21 wistar rats divided into three groups who received optic nerve crush procedure. Group I received intravenous methylprednisolone treatment. Group II received oral melon SOD-gliadin treatment, whereas group III received combination treatment. Eyes were enucleated one week after and histopatologic examination was performed under microscope with 400x magnification.

### Result

Mean RGC density was  $81.43 + 12.921$  in group I;  $85.00 + 13.051$  in group II, and  $84.57 + 13.939$  in group III. Statistical analysis showed no significant difference in RGC density between the combination treatment group when compared with single methylprednisolone ( $p = 0.664$ ) and melon SOD-gliadin ( $p = 0.953$ ) treatment groups.

### Conclusion

There was no significant difference in RGC density between group treated with combination of methylprednisolone and melon SOD-gliadin compared to single methylprednisolone or melon SOD-gliadin treatment groups.

### Keyword

Traumatic optic neuropathy, retinal ganglion cell density, melon superoxide dismutase-gliadin.

### Category

Free Paper Presentation

### Latest Update

August 10, 2020

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**FP-VR-06****COMPARISON OF POST OPERATIVE VISUAL OUTCOME AND COMPLICATION BETWEEN IMMEDIATE AND DELAYED PARS PLANA VITRECTOMY IN PATIENTS WITH VITREOUS HEMORRHAGE DUE TO PROLIFERATIVE DIABETIC RETINOPATHY****Abstract Title**

COMPARISON OF POST OPERATIVE VISUAL OUTCOME AND COMPLICATION BETWEEN IMMEDIATE AND DELAYED PARS PLANA VITRECTOMY IN PATIENTS WITH VITREOUS HEMORRHAGE DUE TO PROLIFERATIVE DIABETIC RETINOPATHY

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**Abstract Type**

Research

**Introduction & Objective**

Vitreous hemorrhage secondary to proliferative diabetic retinopathy is a cause of severe vision loss in diabetic patients. Pars plana vitrectomy with endolaser pan retinal photocoagulation remains procedure of choice for non-clearing vitreous hemorrhage. The aim of this study to compare postoperative visual outcome and complication between immediate and delayed pars plana vitrectomy for patients with vitreous hemorrhage due to proliferative diabetic retinopathy.

**Method**

Medical record of patients who underwent pars plana vitrectomy for vitreous hemorrhage secondary to proliferative diabetic retinopathy was collected. Characteristic, visual outcome, and complication after immediate vitrectomy compared to delayed vitrectomy. Patients were divided into two groups, immediate vitrectomy consist of patient who underwent vitrectomy  $\leq 30$  days and delayed vitrectomy consist of patient who underwent vitrectomy  $> 30$  days.

**Result**

One hundred eight patients eyes underwent pars plana vitrectomy, 29 had immediate pars plana vitrectomy while 79 had delayed pars plana vitrectomy. There was no statistically significant difference in visual outcome and complication between immediate pars plana vitrectomy and delayed pars plana vitrectomy. Rebleeding occurred in 31.25% in immediate pars plana vitrectomy with endolaser, 23.07% in immediate pars plana vitrectomy with endolaser and membrane peeling, 11.43% in delayed pars plana vitrectomy with endolaser, and 18.18% in delayed pars plana vitrectomy with endolaser and membrane peeling.

**Conclusion**

Immediate pars plana vitrectomy for vitreous hemorrhage secondary to proliferative diabetic retinopathy had no different visual outcome and complication compared to delayed pars plana vitrectomy. Rebleeding was the most common complications.

**Keyword**

Diabetic Retinopathy, Vitreous Hemorrhage, Pars Plana Vitrectomy

**Category** Free Paper Presentation

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**FP-VR-07****THE EFFECT OF MACULAR VASCULAR DENSITY ON DECREASED CONTRAST SENSITIVITY IN PATIENTS WITH TYPE 2 DIABETES MELLITUS****Abstract Title**

THE EFFECT OF MACULAR VASCULAR DENSITY ON DECREASED CONTRAST SENSITIVITY IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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**Abstract Type**

Research

**Introduction & Objective**

Diabetic retinopathy is a microvascular complication of diabetes mellitus(DM). Microvascular disorders, especially in the lining of the retinal ganglion cells, can result in impaired visual function including reduced contrast sensitivity. Assessment of changes in microvascular structure and visual function before the appearance of clinical manifestations of diabetic retinopathy will be useful for detecting early signs that need attention in DM patients. The purpose of this study to determine the macular vascular density of DM patients that affects the decrease in contrast sensitivity.

**Method**

This was a cross-sectional analytic observational study of 45 people (70 eyes) of DM patients without diabetic retinopathy aged 40-65 years with best visual acuity of 1.0 Snellen card, vascular density examination using OCTA and contrast sensitivity testing using CSV -1000E.

**Result**

In this study the mean vascular density in the normal contrast sensitivity group was  $14.52 \pm 2.940$  mm/mm<sup>2</sup> and in the contrast sensitivity group decreased by  $15.21 \pm 2.135$  mm/mm<sup>2</sup> ( $p=0.354$ ). In the normal contrast sensitivity group at 6 cpd spatial frequency, the mean vascular density was  $14.71 \pm 2.425$  mm/mm<sup>2</sup>, and in the contrast sensitivity group decreased at  $15.36 \pm 2.149$  mm/mm<sup>2</sup> in the spatial frequency ( $p=0.243$ ). While in the normal contrast sensitivity group at 18 cpd spatial frequency, the mean vascular density was  $14.62 \pm 2.341$  mm/mm<sup>2</sup>, and in the decreased contrast sensitivity group was  $15.47 \pm 2.172$  mm/mm<sup>2</sup> ( $p=0.123$ ).

**Conclusion**

There was no effect of macular vascular density on the decreased contrast sensitivity in patients with type 2 diabetes mellitus.

**Keyword**

diabetes mellitus, contrast sensitivity, vascular density

**Category**

Free Paper Presentation

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## FP-VR-08

### COMPARISON OF CHOROIDAL THICKNESS IN TYPE 2 DIABETES MELLITUS PATIENTS WITHOUT AND WITH DIABETIC RETINOPATHY

#### Abstract Title

COMPARISON OF CHOROIDAL THICKNESS IN TYPE 2 DIABETES MELLITUS PATIENTS WITHOUT AND WITH DIABETIC RETINOPATHY

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#### Abstract Type

Research

#### Introduction & Objective

Vascular complications in diabetes mellitus (DM) can occur in choroidal blood vessels. One way to assess the choroidal blood vessels is to measure the thickness of the choroidal layer. However, the difference of the choroidal thickness in DM patients and when complicated by diabetic retinopathy (DR) still a controversy. This study aims to compare choroidal thickness in type 2 DM patients without and with DR

#### Method

This is a cross-sectional study, conducted in January - April 2020 at Cicendo Eye Hospital. A total of 48 participants (75 eyes), who had been matched were included, divided into a control group, a group of DM without DR (NDR), and a group with DR. Choroidal thickness were measured manually using caliper tool in Spectral Domain (SD)-OCT with EDI. Statistical analysis were done with Kruskal Wallis test continued with Post Hoc analysis with Mann Whitney test. The results are significant if the P value  $\leq$  0.05.

#### Result

The mean age of the subjects was  $51.63 \pm 4.26$  years old. The average choroidal thickness in the control group was  $274.84 \pm 75.81$  mm, in the NDR group was  $276.48 \pm 46.58$  mm, and in the DR group was  $251.56 \pm 59.66$  mm. There were no significant difference between the 3 groups ( $P = 0.073$ ). However, there was a significant difference between NDR and DR group ( $P = 0.017$ ).

#### Conclusion

There was a difference of choroidal thickness in patients with type 2 diabetes mellitus without and with diabetic retinopathy.

#### Keyword

choroidal thickness, SD-OCT, diabetic retinopathy

#### Category

Free Paper Presentation

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## FP-VR-09

### CHARACTERISTICS OF VITREO-RETINA OUTPATIENT DURING CORONA VIRUS-DISEASE- 19 PANDEMIC IN SANGLAH HOSPITAL

#### Abstract Title

CHARACTERISTICS OF VITREO-RETINA OUTPATIENT DURING CORONA VIRUS-DISEASE-19 PANDEMIC IN SANGLAH HOSPITAL

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#### Abstract Type

Research

#### Introduction & Objective

Coronavirus is a new issue. In response to this, most of ophthalmology societies are recommending avoiding any treatment, to reduce transmission. In this study we would like to report the characteristic of vitreo-retina outpatient during this pandemic.

#### Method

Descriptive study, followed by cross sectional. Data were collected retrospectively from medical report of vitreo-retinal outpatient at Sanglah Hospital during March-July 2020.

#### Result

Of the 666 cases, 69.4% were male, and 82.7% were old cases. Majority were in age group 51-60 years (37.7%). The most common symptom was decreasing vision (76.3%) and 2.1% were last eye. Top 5 cases were proliferative diabetic retinopathy (15.3%), diabetic macula edema (11.4%), wet age macular degeneration (10.1%), post-surgery procedure (9.4%) and retinal detachment (8.6%). Based on American Society of Retina Specialists guidelines, patients classified with low (25.4%), medium (14.6%) and high risk (61.0%) patient. Low risk is patient's condition that can be deferred (rebooked 4-6 months), medium risk is patient's condition that can be handled through phone (rebooked 3 months) and high risk is sight-threatening condition requiring face-to-face visit. The level of intervention's emergency classified into emergent (57.4%), urgent (4.7%) and non-urgent (38.0%). Intervention can be surgery, injection, laser, and other procedure. We classified this level depend on patient's condition and risk of vision loss.

#### Conclusion

Most of outpatient in vitreo-retina division were true emergency and need emergent intervention. It is necessary to rearrange ophthalmologist appointments in order to control viral spread and maximize patient and health-care provider's safety. Current evidence suggests deferring all non-urgent and low risk patient.

#### Keyword

Coronavirus, Vitreo-retinal, Outpatient

#### Category

Free Paper Presentation

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**FP-VR-10****CHARACTERISTIC OF PATIENT UNDERWENT SURGERY IN VITREO-RETINAL OPERATING THEATRE DURING CORONAVIRUS-DISEASE19 PANDEMIC****Abstract Title**

CHARACTERISTIC OF PATIENT UNDERWENT SURGERY IN VITREO-RETINAL OPERATING THEATRE DURING CORONAVIRUS-DISEASE19 PANDEMIC

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**Abstract Type**

Research

**Introduction & Objective**

The American Society of Retina Specialists released guidelines to help retina practices reduce risk and assure the health and safety of patients during the COVID-19 pandemic. The guidelines categorized as emergent, urgent and non-urgent procedure. It depends on patient's condition. In this study we evaluate the Status of vitreo-retinal patients who underwent surgery. Is it true or false emergency?

**Method**

Descriptive study, followed by cross sectional. Data were collected retrospectively from medical report of vitreo-retinal patients at Operating theatre Sanglah Hospital during March-July 2020.

**Result**

Of the 21 cases, 66.7% were male. Majority were in age group 41-50 years (38.1%). Top 5 cases were rhegmatogenous retinal detachment (28.6%), silicone oil filled eye (14.3%), re-dettach retina (14.3%), advanced proliferative diabetic retinopathy (9.5%), and lens subluxation with secondary glaucoma (9.5%). The procedure performed at operating theatre were vitrectomy (76.2%) and silicon oil evacuation (23.8%). On vitrectomy, 25.0% were combine with scleral buckle and 6.3% with trabeculectomy. The most causes of vitrectomy were rhegmatogenous retinal detachment (37.5%), then re-dettach retina (18.8%), lens subluxation (12.5%), and tractional retinal detachment (12.5%). Based on level of emergency, most procedure were true emergency (66.7%), non-urgent (19%) and urgent (14.3%).

**Conclusion**

Most of procedure at vitreo-retinal operating theatre was true emergency. It is necessary to rearrange procedure in order to control viral spread. Current evidence suggests deferring all non-urgent procedure and providing only acute and sightthreatening conditions.

**Keyword**

COVID-19, Vitreo-retinal, Surgery

**Category**

Free Paper Presentation

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**FP-VR-11****THE CORRELATION OF LEUCOCYTE PROFILES IN VARIOUS DEGREES OF DIABETIC RETINOPATHY IN TYPE 2 DIABETES MELLITUS****Abstract Title**

THE CORRELATION OF LEUCOCYTE PROFILES IN VARIOUS DEGREES OF DIABETIC RETINOPATHY IN TYPE 2 DIABETES MELLITUS

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**Abstract Type**

Research

**Introduction & Objective**

Diabetic retinopathy (DR) is a retinal disease due to complications of diabetes mellitus and is one of the major cause of blindness. Many of the molecular and physiologic abnormalities that have been found to develop in the retina in diabetes are consistent with inflammation. The increased innate immune cell activation is often associated with diabetic complications.

**Method**

This study was conducted in Semarang on July 2020. This study was a cross-sectional study which included patients diagnosed with type 2 diabetes. The samples were categorized based on DR staging (Non Diabetic Retinopathy (NDR), Non-Proliferative Diabetic Retinopathy (NPDR), and Proliferative Diabetic Retinopathy (PDR)). Leucocyte profiles were leucocyte, neutrophil, lymphocyte, and monocyte. This study assessed the correlation between leucocyte profiles and staging of DR using Pearson correlation test for normal distribution data and Spearman for abnormal distribution data.

**Result**

Sixty-nine patients were examined and divided into groups; 58% was NDR, 35% NPDR, and 7% PDR. The results of this study showed correlation coefficient (r) value of 0.357 (p=0.003) for leucocytes, 1.81 (p=0.136) for neutrophils, -0.223 (p=0.65) for lymphocytes, -0.163 (p=0.180) for monocytes.

**Conclusion**

This study shows moderate correlation between leucocyte and the staging of DR, while the rest (neutrophils, lymphocytes, and monocytes) shows no correlations.

**Keyword**

Leucocyte Profiles, Diabetic Retinopathy

**Category**

Free Paper Presentation

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## FP-VR-12

### CORRELATION OF CRP LEVELS WITH DIABETIC RETINOPATHY STAGES IN TYPE 2 DIABETES MELLITUS

#### Abstract Title

CORRELATION OF CRP LEVELS WITH DIABETIC RETINOPATHY STAGES IN TYPE 2 DIABETES MELLITUS

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#### Abstract Type

Research

#### Introduction & Objective

**Introduction :** Diabetic retinopathy (DR) is a common microvascular complication of diabetes. Pathogenesis of DR is microvascular disorder because of long term hyperglycemia. C-reactive protein (CRP) is an inflammatory biomarker involved in endothelial dysfunction and atherogenesis and has been associated with microvascular complications of diabetes. **Objective :** To determine the correlation of CRP levels and DR stages in type 2 DM in health facilities, Semarang.

#### Method

This study, which conducted in July 2020, was a cross-sectional study. All patients underwent comprehensive ophthalmologic examination were divided into three groups: Non Diabetic Retinopathy (NDR) patients, Non-Proliferative Diabetic Retinopathy (NPDR) patients, and Proliferative Diabetic Retinopathy (PDR) patients. Each group was performed CRP examination. Diabetes was defined on diabetic medication or a history of physician-diagnosed diabetes. This study assessed the correlation of CRP levels and DR stages using Spearman correlation test.

#### Result

There were 69 DM patients divided into 40 patients NDR (58%); 35 patients NPDR (35%); and 5 patients PDR (7%), ranging from 35-61 years old with onset of DM 1 months to more than 10 years. Analysis of the C-reactive protein levels for three groups showed no correlation with the severity of diabetic retinopathy (correlation coefficient ( $r$ ) = 0.08;  $p > 0.05$ ). There were no correlation between CRP levels with age (correlation coefficient ( $r$ ) = 0.08;  $p > 0.05$ ) and with onset of DM (correlation coefficient ( $r$ ) = 0.221;  $p > 0.05$ ).

#### Conclusion

There is no correlation between plasma CRP levels and the staging of DR.

#### Keyword

Keywords: C-Reactive Protein, Diabetes Mellitus, Diabetic Retinopathy

#### Category

Free Paper Presentation

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## FP-VR-13

### PASCAL Panretinal Photocoagulation in Prevention of Diabetic Retinopathy Progression

#### Abstract Title

PASCAL Panretinal Photocoagulation in Prevention of Diabetic Retinopathy Progression

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#### Abstract Type

Research

#### Introduction & Objective

Panretinal photocoagulation (PRP) is recognized as a standard treatment of proliferative diabetic retinopathy (PDR). Recently, the pattern scan laser system (PASCAL®) was developed as a novel semi-automatic photocoagulator that delivers single applications of multiple laser burns in a shorter pulse duration of 10–30 ms, which offers better preservation of retina than conventional laser. The aim of this study is to describe the effectivity of PASCAL in prevention of progression of diabetic retinopathy.

#### Method

Retrospective study from the electronic medical record. We collected the data of pre-treatment BCVA, post-treatment BCVA, laser parameter, fluece, and the clinical progression of DR from consecutive patients with PDR underwent PRP using PASCAL between July 2018 – Juni 2019 at JEC Eye Hospital that meet the criterias.

#### Result

From 107 patients that meet the criterias, mean pre-treatment BCVA was  $0.46 \pm 0.34$  (snellen),  $0.50 \pm 0.33$ ; 1 month,  $0.51 \pm 0.32$ ; month-3, and  $0.50 \pm 0.31$ ; month-6. 95% patient had single session of therapy. The mean laser power was  $459 \pm 108$  (250 – 800) mW,  $2369 \pm 804$  (343 – 4292) for mean of total spot, mean fluence of  $6.0 \pm 1.3$  (4 – 10) Joule/cm<sup>2</sup>. 30% of the patient recieved combine therapy with anti-VEGF (Aflibercept 11%; Bevacizumab 62%; Ranibizumab 26%), and 72% patient had no progression of macular thickness. 83% of the total patients has no progression of DR and had visual stability.

#### Conclusion

PASCAL Laser provides effective and safe prevention method for diabetic retinopathy progression.

#### Keyword

PASCAL, photocoagulation, diabetic retinopathy

#### Category

Free Paper Presentation

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## FP-VR-15

### Pattern of Vitreo-Retinal Diseases in Bali Mandara Eye Hospital January 1st - December 31st, 2019

#### Abstract Title

Pattern of Vitreo-Retinal Diseases in Bali Mandara Eye Hospital January 1st - December 31st, 2019

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#### Abstract Type

Research

#### Introduction & Objective

Vitreoretinal diseases (VR) can cause blindness worldwide, the number is increasing, but its epidemiology data in Indonesia is limited. The purpose of this study is to identify patterns of VR diseases in Bali Mandara Eye Hospital.

#### Method

A descriptive retrospective study. We reviewed all medical records of newly patient with vitreoretinal diseases, from January 1st-December 31st, 2019. We measured demography, history of systemic and eye disease, symptoms and duration, ophthalmological examinations, diagnostic investigations, final diagnoses, therapies, and the completion of the visit.

#### Result

Out of 2118 totally visits, we found 1191 cases. Male:female ratio was 1.3:1. We found group of 46-65 years in 678 cases (56.9%). The most common diagnosis is diabetic retinopathy (337 cases, 19.7%), followed by Rhegmatogen Retinal Detachment (185 cases, 10.8%), and vitreous opacity (170 cases, 9.9%). Diabetic retinopathy affected 302 eyes bilaterally (89.6%), while rhegmatogen retinal detachment and vitreous opacity commonly affected 1 eye; (95%), (73%) respectively. Proliferative Diabetic Retinopathy was found in 171 cases (50.7%). Diabetes type 2 was the most common systemic history (185 cases, 15.5%), followed by combination of diabetes and hypertension (167 cases, 14%) and hypertension alone (154, 12.9%). Previous cataract surgery founded in 174 cases (14.6%). Blindness was found in 553 cases (46.4%).

#### Conclusion

Diabetic Retinopathy and Rhegmatogen Retinal Detachment were the most two common diagnoses. Proliferative type was slightly common than Non Proliferative Diabetic Retinopathy. As diabetes and hypertension were the most condition we found, collaboration with another department is needed to create strategic screening system and early detection. Evaluation related to rhegmatogen retinal detachment is needed to decrease the number of cases.

#### Keyword

vitreo-retinal diseases, diabetic retinopathy, Bali-Indonesia

#### Category

Free Paper Presentation

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## FP-POS-01

### The effect of glutation on malondyaldehyde (MDA) serum level in Retinopathy of prematurity rat models

#### Abstract Title

The effect of glutation on malondyaldehyde (MDA) serum level in Retinopathy of prematurity rat models

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#### Abstract Type

Research

#### Introduction & Objective

Retinopathy of prematurity is the leading cause of blindness in newborn babies worldwide. Anti-oxidant therapy was developed as a retinopathy of prematurity therapy by assessing its effect on the oxidative stress of the tissues. Glutathione is a primary endogenous in human body and its supplementation has been discovered for its benefits towards some ocular diseases. This study aimed to understand the effect of glutathione on stress oxidative marker, serum Malondialdehyde (MDA), in Wistar retinopathy of prematurity rat models.

#### Method

This study was an experimental study using post test only controlled group design. Sixteen Wistar were divided into two groups. Oxygen 95% exposure for 4 hours / day and glutathione 1.5 mg intramuscular / day were administered to the treatment group for 14 days while control group received oxygen 95% exposure for 4 hours / day for 14 days. Both group were settled in a room temperature settings on days 14-21. MDA level analysis by ELISA method using MDA analyser kit was performed on serum samples obtained from retro-orbital artery after intervention. Statistical analyses were done using Saphiro wilk and T test.

#### Result

MDA level was found higher significantly in treatment group compared to control group (546.99 ng/ml and 201.51 ng/ml, respectively, p

#### Conclusion

serum MDA level in retinopathy of prematurity rat models injected by glutathione was higher than the control group.

#### Keyword

Retinopathy of prematurity, glutathione, Malondialdehyde

#### Category

Free Paper Presentation

#### Latest Update

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## FP-POS-02

### CHANGE OF PHORIA BETWEEN PLAYING VIRTUAL REALITY AND SMARTPHONE GAMES ON EMETROPIA

#### Abstract Title

CHANGE OF PHORIA BETWEEN PLAYING VIRTUAL REALITY AND SMARTPHONE GAMES ON EMETROPIA

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#### Abstract Type

Research

#### Introduction & Objective

Playing smartphone-based virtual reality (VR) games with a three-dimensional (3D) display is reported to cause more eye fatigue than playing games with smartphone. When viewing 3D images there is an imbalance between accommodation and vergence where accommodation remain focused on the screen, while the eye unify the image by changing the vergence. This change will decrease the ability of vergence and the occurrence of phoria. Purpose of this study to compare change of phoria in individuals after playing VR and smartphone games.

#### Method

This research is a cross sectional analytic study with a cross-study design. Subjects were divided into two groups. The first group played VR games first continued with playing smartphone games and the second group vice versa. Measurements of phoria were taken with the prism alternate cover test before and after the activity of playing games for 30 minutes with a washout between them for 30 minutes.

#### Result

The total number of subjects were 32 people with mean age of 21 years, range of 19-32 years. The number of men and women subjects were 17 people (53.1%) and 15 people (46.9%). The most common phoria pattern was exophoria (62.5%) followed by orthophoria (37.5%). Using the wilcoxon test, a significant difference was found that changes in near phoria were greater after playing VR games (p

#### Conclusion

The change in near phoria after playing games in virtual reality is greater than after playing games in smartphone on emetropia.

#### Keyword

phoria, virtual reality, smartphone.

#### Category

Free Paper Presentation

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## FP-POS-03

### CHARACTERISTIC AND MANAGEMENT OF PATIENT WITH CONGENITAL RUBELLA SYNDROME IN CICENDO EYE HOSPITAL NATIONAL EYE CENTER

#### Abstract Title

CHARACTERISTIC AND MANAGEMENT OF PATIENT WITH CONGENITAL RUBELLA SYNDROME IN CICENDO EYE HOSPITAL NATIONAL EYE CENTER

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#### Abstract Type

Research

#### Introduction & Objective

Congenital rubella syndrome is an avoidable cause of visual disability. Congenital rubella syndrome often associated with ocular and systemic disease that are important for early diagnosis and management to prevent visual deprivation. This study aims to determine the characteristic, clinical manifestation and management associated with congenital rubella syndrome in Cicendo Eye Hospital National Eye Center during January 2015 – December 2018.

#### Method

This was a retrospective observational study and conducted from January 2015 – December 2018. The medical records of patients diagnosed with laboratory confirmed congenital rubella syndrome were included. We studied the demographic profile, associated ocular and systemic manifestation, and the management.

#### Result

A total 63 eyes of 38 patients were included. In this study, 84,21% of patients were below 6 months of age and 65,79% of patients were presented with bilateral manifestation. Ocular manifestations included congenital cataract (96,8%), congenital glaucoma (3,2%) and pigmentary retinopathy (1,6%). Non ocular manifestations included congenital heart disease (31,6%), hearing impairment (52,6%), microcephaly (50%) and developmental delay (34,2%). Surgical management were performed in all cases. Irrigation aspiration with primary posterior capsulotomy and anterior vitrectomy were performed in 96,83% of patients. Postoperative complication involved visual axis opacity in 7 patients.

#### Conclusion

This study showed that congenital cataract was the most common ocular manifestation of congenital rubella syndrome. Irrigation aspiration with primary posterior capsulotomy and anterior vitrectomy was the most frequent surgery technique.

#### Keyword

Congenital rubella syndrome, ocular and non ocular manifestation, cataract and glaucoma surgery

#### Category

Free Paper Presentation

#### Latest Update

August 12, 2020

#### Status

Submitted

## FP-POS-05

### Stem Cell Therapy following High-Dose Chemotherapy in Advanced Retinoblastoma: A Systematic Review

#### Abstract Title

Stem Cell Therapy following High-Dose Chemotherapy in Advanced Retinoblastoma: A Systematic Review

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#### Abstract Type

Research

#### Introduction & Objective

Retinoblastoma with extra ocular and high-risk features is challenging to treat. High-dose chemotherapy is a promising treatment option despite its lethal effect on bone marrow suppression. Stem cell transplantation can be used to effectively replenish bone marrow storage. The efficacy and safety of combined high-dose chemotherapy and stem cell transplantation (HDCT-SCT) is less explored in retinoblastoma. Therefore, we aim to analyse the risk and benefit of this treatment in advanced retinoblastoma patients.

#### Method

A comprehensive literature search from four online databases was done for original studies evaluating the use of HDCT followed by SCT in the treatment of patients with advanced retinoblastoma.

#### Result

A total of 35 studies consisting of 160 patients were considered suitable for inclusion. Following HDCT-SCT treatment, 108/160 (67.5%) patients were alive with no evidence of disease at the last follow-up. The incidence of secondary malignancy in our data was also relatively low, which was 16/160 (10%) patients. The side effects were mainly haematological and gastrointestinal toxicities. The prognosis for metastatic cases especially the one to the central nervous system (CNS) remains poor, as shown in our data that 22/44 (50%) patients died due to the evidence of disease and 12/44 (27/27%) patients acquired CNS relapse and died.

#### Conclusion

In summary, HDCT-SCT is a promising treatment option in patients with advanced retinoblastoma. The use of HDCT-SCT in CNS metastases needs to be carefully considered, possibly by adding thiotepa or topotecan to improve tumor control. Further randomized clinical trials are needed to draw firm conclusion regarding its safety and efficacy.

#### Keyword

stem cell therapy, high dose chemotherapy, advanced retinoblastoma

#### Category

Free Paper Presentation

#### Latest Update

August 14, 2020

#### Status

Submitted

## FP-POS-06

### Optical Iridectomy as an Alternative Clear Visual Axis for Peters' Anomaly

#### Abstract Title

Optical Iridectomy as an Alternative Clear Visual Axis for Peters' Anomaly

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#### Abstract Type

Research

#### Introduction & Objective

Peters' anomaly is a rare congenital disease presented with central leukoma, iridocorneal adhesion, and with or without a cataractous lens. The presence of central leukoma will block the visual axis and lead to a disruption in normal visual development. Therefore, optical iridectomy, which can overcome the high incidence of graft failure in penetrating keratoplasty (PK), has been proposed as the alternative treatment to clear the visual axis. This study aims to show the outcome of optical iridectomy in patients with Peters' anomaly.

#### Method

Systematic literature searched in Pubmed, Google Scholar, and Cochrane from their inception to August 2020 was conducted using Keywords "iridectomy" and "Peters' anomaly". Full-text articles in English that report the outcome of iridectomy in Peters' anomaly were included, and a manual review of article bibliographies was done. Outcome measures were analyzed using the following clinical questions: indication, age, visual acuity (VA), and intraocular pressure (IOP).

#### Result

One case series and two case reports demonstrating the use of optical iridectomy in Peters' anomaly were identified. In total, 26 patients aged four weeks to 92 months received optical iridectomy to establish a clear visual axis. All studies showed an improvement in visual acuity, either through streak retinoscopy test or fix and follow test, and one of the studies showed a better postoperative VA in bilateral cases. All studies showed good control of IOP.

#### Conclusion

Optical iridectomy can be used as a safe procedure to improve visual acuity in Peters' anomaly patient.

#### Keyword

anterior segment dysgenesis, optical iridectomy, peters' anomaly

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Submitted

## FP-POS-07

### THE EFFECT OF ASTAXANTHIN ON MALONDIALDEHYDE (MDA) LEVELS SERUM OF RETINOPATHY PREMATURITY MICE

#### Abstract Title

THE EFFECT OF ASTAXANTHIN ON MALONDIALDEHYDE (MDA) LEVELS SERUM OF RETINOPATHY PREMATURITY MICE

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- (-)

#### Abstract Type

Research

#### Introduction & Objective

Premature retinopathy is one of many complications of preterm birth and the biggest cause of morbidity in neonates worldwide. Antioxidant therapy works as preventive therapy in retinopathy prematurity by asserting its effect on tissue oxidative stress. Astaxanthin is an exogenous antioxidant from the Xanthophyll carotene group and it shows a positive effect as an antioxidant in several eye diseases and diseases of other organs. This study discusses the comparison of astaxanthin to the levels of oxidative stress markers, namely Malondialdehyde (MDA) serum Wistar rat models of premature retinopathy.

#### Method

Experimental studies with post-test only controlled group design. Sixteen Wistar retinopathy models of prematurity were divided into two groups. The treatment group received 95% oxygen exposure for 4 hours / day and oral astaxanthin 0.06 mg / day for 14 days, while the control group received oxygen in the same way. Both groups were left at room temperature on days 17-23. Malondialdehyde (MDA) analysis by ELISA method using MDA analyzer kit was carried out on serum samples taken from retro orbital arteries after they were done. Statistical data were analyzed by the SPSS method.

#### Result

MDA levels were higher in the treatment group than in the control group (638.64 ng / ml vs 499.63 ng / ml, respectively, p

#### Conclusion

MDA serum levels of Wistar rats in the retinopathy model of prematurity given astaxanthin were higher than in the control group.

#### Keyword

Retinopathy of prematurity, Astaxanthin, Malondialdehyde.

#### Category

Free Paper Presentation

#### Latest Update

August 15, 2020

#### Status

Approved As Free Paper

## FP-POS-08

### Correlation Between Visual Evoked Potential Flash And Pattern Examination Results With Amblyopian Degree In Refractive Amblyopia Children

#### Abstract Title

Correlation Between Visual Evoked Potential Flash And Pattern Examination Results With Amblyopian Degree In Refractive Amblyopia Children

#### First Author

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#### Abstract Type

Research

#### Introduction & Objective

Amblyopia is a decreased vision in one or both eyes without any abnormal eye structure or visual pathway. The degree of amblyopia is determined by the results of subjective examinations called BCVA. Based on the stimulus, Visual Evoked Potential (VEP) is divided into 2, flash and VEP patterns. Aim: to prove the correlation between visual evoked potential flash and pattern examination results with amblyopia degree in refractive amblyopia children.

#### Method

Analytic observational study with cross-sectional design. A total of 36 children aged 4-15 years with 12 samples of each amblyopia degree. VEP latency and amplitude were assessed using Roland Reti measurement instrument (Model ISXEV 60, Germany). Data were analyzed using Kruskal Wallis Test, Post Hoc Mann Whitney U Test and Spearman Correlation Test.

#### Result

VEP flash (107.13±5.59 & 129.74±16.63) and pattern latency mean (120.15 ±7.21 & 128.84 ±2.64) in mild and severe amblyopia was significantly different (P=0,001, P=0,011). VEP flash (7.09±2.32 & 4.24 ±1.18) and pattern amplitude mean (7.24±2.23 & 3.97±2.07) in mild and severe amblyopia was significantly different (P= 0.001, P=0,002). There was negative significant correlation in VEP flash and pattern amplitude (r=-0,465, P

#### Conclusion

There was a significant difference between VEP flash and pattern latency and amplitude towards amblyopia degree. There was significant correlation between VEP flash and pattern towards amblyopia degree, longer latency and shorter amplitude was related to more severe amblyopia degree.

#### Keyword

Flash VEP, Pattern VEP, Degree of Amblyopia, Refractive Amblyopia.

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-POS-09

### OCULAR FINDINGS IN CHILDREN WITH BETA THALASSEMIA MAJOR WITH REGULAR BLOOD TRANSFUSION IN SUMATERA EYE CENTER, MEDAN

#### Abstract Title

OCULAR FINDINGS IN CHILDREN WITH BETA THALASSEMIA MAJOR WITH REGULAR BLOOD TRANSFUSION IN SUMATERA EYE CENTER, MEDAN

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#### Abstract Type

Research

#### Introduction & Objective

Beta-thalassemias are a group of hereditary blood disorders characterized by anomalies in the synthesis of the beta chains of hemoglobin<sup>1</sup>. The clinical picture of children with thalassemias varies widely, following : some pallor, slight scleral icterus, enlarged abdomen and growth retardation. The ocular complication commonly because of the iron deposition in eye, like angioid streak in retina, pseudoxanthoma elasticum (PXE), or complicated cataract<sup>3</sup>.

#### Method

We collected data from 40 samples positively diagnosed with beta thalassemia major. The patients referred to Sumatera Eye Center Hospital Medan to perform several ocular screenings like visual acuity screening, anterior segment screening and posterior segment screening. Data presented in table as percentage (%). The study is retrospective descriptive.

#### Result

The result showed that the number of sample was composed by 24 males (60%) and 16 females (40%), mostly in age above 5 years old (60%). The ocular findings we found : 10 samples had decreasing visual acuity (25%). The anterior segment abnormality findings were scleral icteric (55%), complicated cataract (12.5%) and iris deposits (2.5 %). The posterior segment abnormalities were optic atrophy (7.5%), papilledema (12.5%) and other retinal changes (retinal tortuosity, maculopathy and retinal bleeding) (12.5%).

#### Conclusion

The occurrence of ophthalmologic problems in thalassemia patients is common. These patients should be screened for such complications. However, the awareness of subclinical disease will decrease the number of blindness.

#### Keyword

Beta-Thalassemia, ocular findings, visual acuity

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-POS-10

### The Use of Pixel Count Analysis in Evaluating Vasoconstriction Effect of 2,5% Phenylephrine on Conjunctival Vessels of Pre-Operative Strabismus Patients

#### Abstract Title

The Use of Pixel Count Analysis in Evaluating Vasoconstriction Effect of 2,5% Phenylephrine on Conjunctival Vessels of Pre-Operative Strabismus Patients

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#### Abstract Type

Research

#### Introduction & Objective

Computer - based analysis using digital photos has developed rapidly in the past decade and has been advantageous to medical field. Technique used in evaluating anterior oculi blood vessels mostly were semi-qualitative grading techniques, which are subjective and has poor reliability, and up-to-date there is no assessment for quantifying vasoconstriction. Pixel count is a digital image processing technique that uses binary format, allowing images to be assessed based on each dot / pixel points. The purpose of this study is to evaluate the validity and reliability of pixel count analysis in assessing vasoconstriction in conjunctival vessels after the administration of 2,5% phenylephrine quantitatively.

#### Method

A paired analytic prospective study. Fifteen subjects, age 5 - 35 years-old were included. Two-hours before strabismus corrective surgery was performed, conjunctival photos using integrated slit-lamp camera on 4 regions were taken prior, 15 and 30 minutes after phenylephrine 2,5% instillation. The blood vessels were quantified by pixel from the photos after image process using FIJI software.

#### Result

Statistically significant changes by pixel count were found when conjunctival vessels vasoconstriction were induced using phenylephrine 2,5% eye drop in all 4 regions of conjunctiva. On the other hand, reliability, measured by Interclass Correlation Coefficient analysis showed a variation where between the first and second rater reliability were higher compare to both rater and the third rater.

#### Conclusion

Pixel count analysis is a valid tool in assessing conjunctival vasoconstriction quantitatively, and its reliability could still be improved by increasing familiarity of pixel count software among raters and optimizing photo capture.

#### Keyword

pixel count analysis; vasoconstriction; conjunctiva vessels; strabismus

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-POS-11

### Intraocular Pressure in Children with Anterior Segment Dysgenesis: Is It High?

#### Abstract Title

Intraocular Pressure in Children with Anterior Segment Dysgenesis: Is It High?

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#### Abstract Type

Research

#### Introduction & Objective

Anterior segment dysgenesis (ASD) is a complex disease that often led to secondary glaucoma. Nevertheless, studies have not been able to find risk factors related to high intraocular pressure, which is one of the major risk factors for developing glaucoma. This study aims to find the correlation between the laterality of ASD with intraocular pressure (IOP).

#### Method

A retrospective cross-sectional study was conducted based on medical records at Cipto Mangunkusumo Hospital Kirana. The data collection was carried out from January 2017 to July 2020. The study employed a complete record of patients with ASD. Data were analyzed using SPSS 23.0.

#### Result

ASD was diagnosed in 29 patients with a significant increase (37.5%) in the number of patients between 2018-2019. The median age at diagnosis was  $18.52 \pm 30.58$  months, and 58.6% presented with bilateral disease. The most prevalent clinical condition is leucoma (72.92%), followed by microcornea and corneal neovascularization. Additionally, a shallow anterior chamber was found in all patients. However, high IOP was only found in 51.72% of patients, and of those, 34.48% was found in bilateral ASD. Further comparative evaluation showed no significant difference between laterality with intraocular pressure.

#### Conclusion

There was a higher incidence of high IOP in bilateral ASD, both in the time of presentation and follow-up. However, it cannot be proven as the risk factor for the development of secondary glaucoma. Thus, examination under anesthesia (EUA) and a close monitor of the intraocular pressure is still needed in all cases.

#### Keyword

Anterior segment dysgenesis, laterality, high IOP, glaucoma

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Submitted

## FP-POS-03

### Visual Interventions for Children with Cortical Visual Impairment: A Review of Current Evidence

#### Abstract Title

Visual Interventions for Children with Cortical Visual Impairment: A Review of Current Evidence

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#### Abstract Type

Research

#### Introduction & Objective

Cortical visual impairment (CVI) has recently become the most frequent cause of visual impairment in children in developed nations and increasing in prevalence in developing countries. Currently, there is no standard therapy for these children. However, various types of visual intervention have been proposed and shown visual improvement. The aim of this review is to summarise the evidence implying visual rehabilitation as potential interventions in children with CVI.

#### Method

Pubmed, SCOPUS, and Cochrane data bases using Mesh terms to retrieve articles related to visual intervention in children with CVI. Different combination of search terms were used. Outcome measure were analysed using following clinical questions: given interventions and outcome measures in visual function and functional vision.

#### Result

As a result, eight articles illustrating the visual interventions in children with CVI. Five prospective observational studies, 1 controlled study, 1 retrospective study, and 1 case report were retrieved. There is some evidence that visual intervention improve visual function (e.g. visual acuity, contrast sensitivity) and functional vision in children with CVI. The visual improvement rates from 30.9% up to 95%. This evidence has limitations, including heterogeneity in interventions, objective evaluation, and small sample size.

#### Conclusion

Although most of the studies show improvement, these result should be interpreted in the context of limitation related to the scarcity of data supporting these interventions. However, these existing studies still provide valuable information on different approaches and further studies using standardized methods are critical.

#### Keyword

cortical visual impairment, children, visual rehabilitation

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

## FP-REF-01

### THE READING RATE OF SMARTPHONE-BASED HEAD-MOUNTED DISPLAY IN LOW VISION PATIENTS

#### Abstract Title

THE READING RATE OF SMARTPHONE-BASED HEAD-MOUNTED DISPLAY IN LOW VISION PATIENTS

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#### Abstract Type

Research

#### Introduction & Objective

Reading rate is an important predictor of reading ability. Optimization of visual function and reading rate could be achieved by using low vision aid. Nowadays, smartphone could be used as a head-mounted display (HMD) for low vision aid use. The features of smartphone-based HMD are modifiable magnification, brightness control, and contrast enhancement. The purpose of this study to compare the reading rate using smartphone-based HMD with optical low vision aid in low vision patients.

#### Method

A randomized clinical trial on 49 patients, aged 18-70 years old, with best-corrected visual acuity on the better eye

#### Result

The median of reading rate using smartphone-based HMD and optical low vision aid were 32,22 words per minute (wpm) and 33,21 wpm ( $p=0,574$ ). Additional analysis revealed no statistically significant of reading rate between both of low vision aid based on the degree of visual impairment, contrast sensitivity, visual field defect, cause of low vision, and the power of optical low vision aid. Smartphone-based HMD reading rate was better than optical low vision aid in  $\geq 12$  diopter.

#### Conclusion

There was no differences between the reading rate of smartphone-based HMD and optical low vision aid. Smartphonebased HMD could be used as a low vision aid alternative.

#### Keyword

Low vision aid, reading rate, head-mounted display

#### Category

Free Paper Presentation

## FP-REF-02

### Novel Therapy Using Limbal Mesenchymal Stem Cell To Reduce Degradation Process On Sclera By Regulating MMP-3 And TIMP-1 Expression In Rabbit With Form Deprivation Myopia (Experimental In Vivo Study)

#### Abstract Title

Novel Therapy Using Limbal Mesenchymal Stem Cell To Reduce Degradation Process On Sclera By Regulating MMP-3 And TIMP-1 Expression In Rabbit With Form Deprivation Myopia (Experimental In Vivo Study)

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#### Abstract Type

Research

#### Introduction & Objective

Various methods preventing myopia progression were investigated both in vitro, in vivo, and clinical trials. Here we investigate the capability limbal mesenchymal stem cell (LMSC) in reducing myopia progression (reduce MMP-3, and increase TIMP-1) in animal model form deprivation myopia.

#### Method

This study using LMSC cultured from rabbit (*Oryctolagus cuniculus*) and isolated using semienzymatic method, modification by Komaratih et al (2019). Twenty four animal model was divided into three group, consist of control group (without deprivation eye), FDM group (form deprivation myopia), and FDM+LSMC group (form deprivation

*myopia and received LSMC injection*). As confirmation FDM was successful, refraction Status evaluated by streak

retinoscopy and axial length measurement using a-scan biometry. After six weeks, enucleated eye was evaluated for LMSC engraftment, MMP-3 and TIMP-1 expression. Results between groups were analyzed using Kruskal-Wallis or oneway ANOVA test followed by post-hoc test with 95% confidence ( $p$

#### Result

After four weeks deprivation, all eye become more myopic. After two weeks, intrasclera injection of LMSC on 2,5mm posterior from limbal migrated to posterior region sclera. MMP-3 expression did not significant difference among three group ( $p>0,05$ ). However, TIMP-1 expression significant higher in FDM+LSMC group ( $p$

#### Conclusion

This result showed that LMSC could increase TIMP-1 expression in form deprivation eye model. Therefore LMSC has role in antimyopic agent in form deprivation eye model by increasing TIMP-1. Other potential effects on treating myopia should be explored.

#### Keyword

limbal mesenchymal stem cell, form deprivation myopia, MMP-3, TIMP-1

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

Approved As Free Paper

**FP-REF-03****THE CHANGES OF AXIAL LENGTH WITH OPTICAL BIOMETRY PRE AND POST CATARACT SURGERY IN THE SANGLAH HOSPITAL DENPASAR****Abstract Title**

THE CHANGES OF AXIAL LENGTH WITH OPTICAL BIOMETRY PRE AND POST CATARACT SURGERY IN THE SANGLAH HOSPITAL DENPASAR

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**Abstract Type**

Research

**Introduction & Objective**

Cataract is one of blindness causes that can be prevented with an incidence of 51% of total blindness in the world. Cataract surgery aims to replace a hazy lens with a clear lens with an intraocular lens (IOL). One component of determining IOL is the Axial Length. which error measurement of axial length is the main reason for unexpected biometric prediction errors, which can cause patient dissatisfaction. This study assessed axial length changes from optical biometric measurement of patients before and after refractive surgery

**Method**

Observational study with a cross sectional study approach. Data were collected retrospectively pre and post cataract surgery at the Sanglah Hospital Denpasar.

**Result**

Research data from January until December 2019 with male gender were 8 people (34.8%), female subjects were 15 people (65.2%). The mean age in patients was 52.48 years. This study found differences in pre and post op AL of 0.04 mm with axial preoperative longer than post op but not statistically significant with  $p = 0.304$ . The mean value in the normal preop axial length category was found  $23.19 \pm 0.71$  compared to post op  $23.18 \pm 0.75$  with a  $p$  value = 0.86. Long category of axial length obtained a preop mean value  $26.99 \pm 1.97$  compared to post op  $26.95 \pm 1.80$  with  $p$  value = 0.78

**Conclusion**

Optical biometry that used at Sanglah hospital eye department is still accurate and close to the actual size

**Keyword**

axial length, optical biometry, intraocular lens

**Category**

Free Paper Presentation

**Latest Update**

August 16, 2020

**Status**

Approved As Free Paper

**FP-REF-04****Profile of Low Vision Patients in Refraction Division Ophthalmology Department Kirana Cipto Mangunkusumo Hospital****Abstract Title**

Profile of Low Vision Patients in Refraction Division Ophthalmology Department Kirana Cipto Mangunkusumo Hospital

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**Abstract Type**

Research

**Introduction & Objective**

Profile of Low Vision Services in Kirana Cipto Mangunkusumo Hospital has not yet been conducted. This study aimed to obtain the profile of new patients in Low Vision Clinic, Refractive Division, Kirana Cipto Mangunkusumo Hospital

**Method**

A descriptive retrospective study was conducted by retrieving data from refractionist logbook and patient's medical record from August 1st, 2017 until July 31st, 2018.

**Result**

Among 140 patients retrieved, males were found to have a low vision more than females (56,43%). Groups of 0-5 years old were the majority of low vision patients (41,43%). Brain abnormalities were found to be the major cause of low vision in the children group (43,88%), while retinal diseases were found to be the major cause of low vision in the adult group (64,29%). Hand magnifier was mostly used and gave the most benefit for low vision patients. About 44,35% of patients were near blindness, mostly in the children group (52,05%). Most patients benefited from near aid, only 5 patients were stable and 1 patient was worsened. Telescope gave a clinical and statistical significance of improvement in 22 patients. Fewer patients came to Low Vision Clinic in June and December.

**Conclusion**

The majority of the patients were male and in the children group. The main cause of low vision were brain abnormalities and retinal diseases. Most patients gained improvement in reading activity and far vision with low vision aid.

**Keyword**

Low vision, Magnifier, Telescope, Blindness

**Category**

Free Paper Presentation

**Latest Update**

August 16, 2020

**Status**

Approved As Free Paper

## FP-ROO-02

### TOPICAL 5-FLUOROURACIL 1% AS THE PRIMARY TREATMENT FOR OCULAR SURFACE SQUAMOUS NEOPLASIA: A SYSTEMATIC REVIEW

#### Abstract Title

TOPICAL 5-FLUOROURACIL 1% AS THE PRIMARY TREATMENT FOR OCULAR SURFACE SQUAMOUS NEOPLASIA: A SYSTEMATIC REVIEW

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#### Abstract Type

Research

#### Introduction & Objective

In tropical countries, one of which is Indonesia, ocular surface squamous neoplasia (OSSN) is a typical lesion. The gold standard of OSSN's treatment is wide excision with no-touch technique. Besides, in the last five years, studies revealed the efficacy of topical medication, hence shifted the trend to less invasive management for OSSN. There are some options of topical medication: mitomycin C (MMC), 5 Fluorouracil (5-FU), and interferon alpha-2B (IFN $\alpha$ 2B). We determined to specifically consider 5-FU due to its lower cost and risk to side effects compared to IFN $\alpha$ 2B and MMC, respectively. This study aims to establish the role of 5-FU as the primary treatment of OSSN.

#### Method

In this systematic review, we included all English-written, full-text studies involving topical 5-FU in biopsy-proven OSSN. All patients treated with topical 5-FU 1% four times a day in a week per cycle.

#### Result

Of all 139 eyes, we found complete resolution in more than 82% of patients, and recurrence in less than 11.5%. The most common side effects of 5-FU were pain, irritation, and epiphora, but no long term side effects were found. The characteristics of a nasal location, thickness > 1.5mm, multifocality were risk factors for non-responsiveness to 5-FU.

#### Conclusion

Topical 5-FU is an excellent option of primary treatment for OSSN, considering its efficacy, recurrence, and side effects. Nevertheless, some characteristics lead to unresponsiveness to this medication.

#### Keyword

Ocular Surface Squamous Neoplasia, 5-Fluorouracil, Squamous Cell Carcinoma

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## ABSTRACT E POSTER

## Epos-GLA-01

### Rubeosis Iridis in Neovascular Glaucoma reduced with Topical Steroid: A Case Report

#### Abstract Title

Rubeosis Iridis in Neovascular Glaucoma reduced with Topical Steroid: A Case Report

#### First Author

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Neovascular glaucoma is a type of secondary glaucoma with poor visual prognosis. It starts with neovascularization and fibrovascular membranes. The clinical sign of new and irregular vessels on the iris's surface is called rubeosis iridis. In common, the first lines of neovascular glaucoma treatments are anti-glaucoma, intravitreal anti-vascular endothelial growth factor, or surgical procedure. In neovascular glaucoma, steroid considers in lowering the inflammation and reducing the severity of illness.

#### Case Illustration

A 60 years old man which came to the emergency room with pain and redness on the right eye followed by headache and nausea since five days ago. He felt a symptom of blurry vision around 5 years ago and has never come to the doctor. The right eye's visual acuity was no light perception, intraocular pressure (IOP) was 48 mmHg, hyphema flare and cell in the anterior chamber, together with rubeosis iridis and horizontal pupil. The results lead to diagnosing neovascular glaucoma which was treated with oral acetazolamide, mannitol intravenous, topical anti-glaucoma, and a topical steroid. In three days, the IOP changed into 27.2 mmHg along with a partial resolution of an anterior chamber which was completely resolved in a month.

#### Discussion

The administration of topical steroids plays a role in reducing the inflammation which considers being a part of angiogenesis and the forming of the fibrovascular membrane.

#### Conclusion

Anti-inflammatory treatment would be considered as an additional treatment for neovascular glaucoma. However, further studies especially interventional studies about the long term effect of steroid treatment in reducing angiogenesis are needed.

#### Keyword

Neovascular Glaucoma, Topical Steroid

#### Category

E-Poster

#### Latest Update

July 24, 2020

#### Status

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## Epos-GLA-02

### 5-Fluorouracil Augmented Trabeculectomy with Releasable Sutures in A Primary Angle Closure Glaucoma Eye

#### Abstract Title

5-Fluorouracil Augmented Trabeculectomy with Releasable Sutures in A Primary Angle Closure Glaucoma Eye

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#### Abstract Type

Case Report

#### Introduction

PACG is defined as the presence of glaucomatous optic neuropathy and a nerve fiber layer-related visual field deficit in the setting of  $\geq 2$  quadrants of synechial or appositional angle closure occluding the pigmented trabecular meshwork on gonioscopy. PACG is a major cause of blindness worldwide, with a high prevalence in certain Asian populations. Trabeculectomy remains the most commonly performed glaucoma surgery for PACG.

#### Case Illustration

A 66-year-old woman presented with a several-month history of headache, decreased vision, pain and redness of the left eye (LE), with similar episodes in the previous year. RE: BCVA 6/21, IOP 25,6 mmHg, a AC depth of Van Herick's grade 0. Gonioscopy: grade 0 in 3 quadrants, grade 1 in 1 quadrant, PAS (+). C/D ratio 0.8 with nasalisation of vessels. OCT suggested RNFL thinning at inferior and superior pole. Inadequate IOP control with 3 anti glaucoma medication, progressive glaucomatous optic nerve damage and/or visual field loss in this patient suggested the indication of filtering surgery.

#### Discussion

Initial treatment with trabeculectomy has demonstrated success in achieving lower IOP. Trabeculectomy stabilizes IOP by minimizing diurnal fluctuation and decreasing dependence on medications compliance. 5-FU increases the success of filtration surgery in phakic eye. The application of releasable sutures can decrease the frequency of hypotony and the formation of a flat anterior chamber and eventually preventing bleb fibrosis and scarring.

#### Conclusion

Trabeculectomy has been the mainstay of glaucoma surgery to reduce long-term glaucomatous progression. 5-FU and releasable suture can increase the success of trabeculectomy in PACG.

#### Keyword

PACG, Trabeculectomy, 5FU, Releasable Sutures

#### Category

E-Poster

#### Latest Update

August 05, 2020

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## Epos-GLA-03

### GLAUCOMA DRAINAGE DEVICE IMPLANTATION WITH IOL EXCHANGE TECHNIQUE IN SECONDARY GLAUCOMA PATIENT WITH PREVIOUS AC IOL IMPLANTATION

#### Abstract Title

GLAUCOMA DRAINAGE DEVICE IMPLANTATION WITH IOL EXCHANGE TECHNIQUE IN SECONDARY GLAUCOMA PATIENT WITH PREVIOUS AC IOL IMPLANTATION

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#### Abstract Type

Case Report

#### Introduction

Secondary glaucoma can occur after implantation of intraocular lens (IOL). Angle closure glaucoma is the most common form of secondary glaucoma in patient with AC IOL implantation. Tube shunt implantation is the preferred surgical procedure to treat difficult glaucoma cases.

#### Case Illustration

An 46 year old man presented with chief complaint of blurry left eye. He was diagnosed with secondary glaucoma and pseudophakia on left eye with AC IOL implantation. Intraocular pressure (IOP) on left eye was 38 mmHg.

Ophthalmologic examination on left eye showed round pupil with AC IOL implantation, peripheral anterior synechiae (PAS) on almost all of quadrants. Cup-disc ratio was around 0.8 with cupping. Glaucoma drainage device implantation followed by IOL exchange to iris claw retropupil on left eye was performed in this patient. On one week postoperative examination, intraocular pressure (IOP) in left eye was 10 mmHg and iris claw retropupil was found intact in the eye.

#### Discussion

AC IOL implantation could induced secondary glaucoma by the presence of pupillary block. Trabeculectomy had done in this patient but still failed to reduce the IOP. Tube shunt implantation followed by IOL exchange was done in this patient and proven to reduce the IOP from 38 to 10 mmHg.

#### Conclusion

Tube shunt implantation is an effective procedure on lowering the IOP in patients with secondary glaucoma induced by AC IOL implantation. However, postoperative management in monitoring the IOP after procedure is highly important to prevent further complications.

#### Keyword

Secondary glaucoma, AC IOL, GDD implants

#### Category

E-Poster

#### Latest Update

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## Epos-GLA-04

### Management Of Steroid-Induced Glaucoma: A Case Report

#### Abstract Title

Management Of Steroid-Induced Glaucoma: A Case Report

#### First Author

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#### Co Author

Fidalia ()

#### Abstract Type

Case Report

#### Introduction

Secondary steroid-induced glaucoma is open-angle glaucoma caused by prolonged use of topical, periocular, intravitreal, inhaled, or oral corticosteroids that give an appearance of primary open-angle glaucoma (POAG). The management including stop, taper, reduce the concentration of the steroid or switch to a topical NSAID, start antiglaucoma therapy and surgery if it's needed.

#### Case Illustration

A 25-year-old woman presented with a history of narrow vision of the right eye (RE), with history of steroids eye drop of the right eye that are in the patient's own purchase. RE: BCVA 5/60 and 6/6 with spectacles, IOP 36.0 mmHg, a AC depth of Van Herick's grade 3. Gonioscopy: grade 3 in 4 quadrants. C/D ratio 0.9 with cupping, notching and nasalisation of vessels. OCT suggested RNFL thinning at the whole quadrant. Depression on humprey examination. Given treatment with timolol acetate 0.5%, latanoprost 0.05%, pilocarpin 2%.

#### Discussion

Treatment with 3 medication of anti-glaucoma has demonstrated success in achieving lower IOP from 36.0 mmHg to 18.0 mmHg. The drugs were successful in reducing the IOP, but did not reach the target IOP based on the patient's C/D ratio, for which the therapeutic target of a C/D ratio of 0.9 was 9 mmHg. Patient advised to undergo trabeculectomy or GDD surgery.

#### Conclusion

Advanced steroid-induced glaucoma, decreased IOP with medical therapy, but considering that glaucoma has advanced, trabeculectomy or GDD surgery should be an option.

#### Keyword

Steroid-induced glaucoma, Steroids, Secondary Open Glaucoma.

#### Category

E-Poster

#### Latest Update

August 14, 2020

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## Epos-GLA-05

### GLAUCOMA MANAGEMENT IN AN EARLY ADULTHOOD AXENFELD-RIEGER SYNDROME: A CASE REPORT

#### Abstract Title

GLAUCOMA MANAGEMENT IN AN EARLY ADULTHOOD AXENFELD-RIEGER SYNDROME: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Glaucoma, the consequence of Axenfeld-Rieger syndrome (ARS), can develop in 50% of patients.

#### Case Illustration

A twenty-one-year-old women came to the clinic with blurred vision in both eyes since last 3 years with pain. Headache since last 2 years and previously medicated. Visual acuity (VA) was 1/60 in both eyes and intraocular pressures (IOP) were 46 mmHg and 37 mmHg respectively. The right eye (RE) showed prominent Schwalbe's line, posterior embryotoxon, corectopia, pseudopolyopia, and diffuse iris stromal hypoplasia. The left eye (LE) showed iris hypoplasia. Gonioscopy revealed iris adhesions in both eyes. Size of cup to disc ratio (CDR) was 0.7 with peripapillary atrophy and myopic crescent in the LE. Humphrey Visual Field (HVF) showed an arcuate defect superiorly, multiple defects in inferior quadrant of the RE and superior arcuate, nasal step in the LE. Non-ocular abnormalities consisted of configuration craniofacial dysmorphism hypertelorism, telecanthus, mid-facial hypoplasia, paraumbilical skin tags, microdontia, hypoplasia, and partial anodontia. Trabeculectomy were planned for both eyes. It has been done with 5-fluorouracil (5FU) in LE. LE visual acuity becomes 5/60 and IOP reduce to 9 mmHg in the 14th day of surgery.

#### Discussion

Significant increase VA on the first day and decreased IOP persisted until the 14th day of surgery. Trabeculectomy can give no or little complications post operativity with good result. Antimetabolite 5FU are used during this procedure in order to reduce bleb failure.

#### Conclusion

Glaucoma in ARS could be treated by trabeculectomy with 5FU.

#### Keyword

Axenfeld-Rieger Syndrome, Glaucoma, Trabeculectomy.

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

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## Epos-GLA-07

### CCT; ITS RELATIONSHIP TO IOP IN HIGH MYOPIA

#### Abstract Title

CCT; ITS RELATIONSHIP TO IOP IN HIGH MYOPIA

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

In a healthy cornea, the Central Corneal Thickness (CCT) varies between 490  $\mu\text{m}$  to 570  $\mu\text{m}$ . CCT has a very important role in glaucoma. Thin CCT results in under estimation of the true Intraocular Pressure (IOP) and thicker CCT results in over estimation of IOP.

#### Case Illustration

We reported 3 cases of high myopia. Case 1. Mrs SR 30 y.o was using glasses since 16 years ago on RE: S-6.00 and LE: S-7.25. IOP RE: 13 mmHg and LE: 12 mmHg. CCT RE: 541  $\mu\text{m}$ , CCT LE: 527  $\mu\text{m}$ . Case 2. Mr SF 15 y.o was using glasses since 5 years ago on both eyes S-6.25. IOP RE: 11 mmHg and LE: 12 mmHg. CCT RE: 541  $\mu\text{m}$ , CCT LE: 507  $\mu\text{m}$ . Case 3. Mrs. SY 47 y.o was using glasses since 37 years ago on both eyes S-6.25. IOP RE: 15 mmHg and LE: 14 mmHg. CCT RE: 565  $\mu\text{m}$ , CCT LE: 561  $\mu\text{m}$ .

#### Discussion

In this serial case reports, while comparing the CCT in high myopes, no significant differences in CCT. The importance of CCT and its effect on the accuracy of IOP measurement (Applanation tonometry) is most accurate when the CCT is 520 $\mu\text{m}$ . Increased CCT may give an artificially high IOP measurement and an artificially low reading. CCT values correlated directly with IOP. The greater the thickness, the higher the pressure.

#### Conclusion

No significant differences on CCT in high myopia. CCT values correlated directly with IOP.

#### Keyword

CCT, IOP, high myopia

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

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## Epos-GLA-08

### Trabeculectomy and 5-Fluorouracil with Releasable Sutures in The Case of Primary Angle Closure Glaucoma: A Case Report

#### Abstract Title

Trabeculectomy and 5-Fluorouracil with Releasable Sutures in The Case of Primary Angle Closure Glaucoma: A Case Report

#### First Author

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#### Abstract Type

Case Report

#### Introduction

Angle closure is defined by the presence of iridotrabecular contact. Population surveys show that PAC is more common among people of Asian. Therapy in glaucoma management aims to lower IOP to slow the rate of visual field deterioration. In cases where other forms of therapy like medicines or laser, have failed, the most widely used surgical procedure is trabeculectomy, which produces a guarded fistula between the anterior chamber and the subconjunctival space

#### Case Illustration

A 60-year-old woman with complaints of discomfort in the right eye, blurred vision, red eye and pain. the same complaint had been experienced in the left eye before. Visual acuity was 6/15 for the right and NLP for the left eye. IOP in the right eye was 34.4 mmHg and in the left eye 42.7 mmHg. There was mixed injection, corneal edema and decreased light reflex in the pupil. Fundoscopy appears cupping in both eyes. Gonioscopy: grade 1 in all quadrants, PAS (+). In OCT, the RNFL is thinner and defects in the visual field. The patient was treated with antiglaucoma drugs but was inadequate with the maximum treatment so trabeculectomy was planned

#### Discussion

The patient underwent trabeculectomy in the right eye to reduce the IOP which was inadequate with medical therapy. Trabeculectomy is performed by adding 5 Fluorouracil to reduce postoperative conjunctival scarring and improve drainage and using releasable sutures can minimize excessive filtration and allow titration of IOP

#### Conclusion

Trabeculectomy + 5FU and releasable sutures have been successful treating inadequate IOP elevation in PACG

#### Keyword

Trabeculectomy, Angle Closure, Glaucoma

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-GLA-09

### DIAGNOSIS AND TREATMENT FOR ELEVATED INTRA OCULAR PRESSURE EC UVEITIC

#### Abstract Title

DIAGNOSIS AND TREATMENT FOR ELEVATED INTRA OCULAR PRESSURE EC UVEITIC

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#### Abstract Type

Case Report

#### Introduction

Elevated intraocular pressure (IOP) is a frequent complication of intraocular inflammation, affecting 5 to 19% of uveitis patients. Glaucoma can be appear on acute uveitis, with 7.6% after 12 months. The ocular inflammation and glaucoma usually can be controlled with anti-glaucoma and anti-inflammatory agents

#### Case Illustration

A 34-year-old man presented with a history of decreased vision, pain and redness of the left eye (LE), with similar episodes in the previous weeks. LE: BCVA 1/60, IOP 35,9 mmHg, mixed injection, corneal edema, KPs (+), a AC depth of Van Herick's grade 4, minimal cell and flare. We treatment with, Timolol 0.5 1drop/12 hours LE, Latanoprost 1 drop/24 hours, Brinzolamide 1% ED 1drop/8 hour LE, Asetazolamide 250mg/8 hours mg, Prednisolone asetat 1 drop/6 Hours LE, SA 1 % 1 drop/8 hours LE, KSR tablet 600mg/24 hours.

#### Discussion

Initial treatment with anti glaucoma and anti inflammatory agent are successfully in achieving lower IOP. After 1 month, left IOP decrease to 12,7 mmHg and the visual acuity 6/6. The ancillary test from the left eye we found that all the test in normal result from the Gonioscopy, Funduscopy, even the Humphrey. The prognosis in these patients is bonam. This is because the patient can quickly be given therapy. Steroid administration is also fast in reducing the inflammatory process so that in this patient there has not been any anatomical changes such as PAS.

#### Conclusion

Anti glaucoma and anti inflammatory agent has demonstrated promised result for reduce the inflammation and treat the elevated Intra Ocular Pressure in uveitic.

#### Keyword

Uveitic, Elevated IOP, Anti Glaucoma agent

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-GLA-10

### Additional Glaucoma Drainage Device After Trabeculectomy and Glaucoma Drainage Device Failure in Juvenile Open Angle Glaucoma

#### Abstract Title

Additional Glaucoma Drainage Device After Trabeculectomy and Glaucoma Drainage Device Failure in Juvenile Open Angle Glaucoma

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#### Abstract Type

Case Report

#### Introduction

Juvenile open angle glaucoma (JOAG) is a subset of primary open angle glaucoma that affecting those who are between 5 and 35 years old, inherited but sporadic cases occasionally occur

#### Case Illustration

A 21-year-old man has been under long-term follow up since he was diagnosed with JOAG on both eyes. He complained tunnel vision with best corrected visual acuity on the right eye (RE) was 6/9 and the left eye (LE) was 1/60. The average intraocular pressure (IOP) was thirties on both eyes. The lens and retinas were normal. The cup-to-disc ratio was 0.9 on RE and 1.0 on LE. Gonioscopy showed that the angle was open to ciliary body band bilaterally without synechia. His RE has undergone trabeculectomy on January 2014 and was implanted superonasally with nonvalved Molteno Drainage on June 2014. His LE has undergone trabeculectomy on 2015 and was implanted inferotemporally with nonvalved AuroLab Aqueous Drainage Implant on 2016. To preserve the visual acuity futher and control IOP of the RE, he had the Virna Glaucoma Drainage Device implanted superotemporally on February 2020. His BCVA of the right eye maintained at 6/9 and IOP was 14

#### Discussion

The major causes of failure in surgical management of JOAG are excessive fibrosis, glaucoma severity and multiple previous surgery. The patient's right eye, which had better vision, got additional glaucoma drainage implant to control the IOP.

#### Conclusion

Additional glaucoma drainage implant showed as excellent choice for controlling IOP and save the vision in JOAG.

#### Keyword

Juvenile open angle glaucoma, glaucoma drainage device, trabeculectomy

#### Category

E-Poster

#### Latest Update

August 16, 2020

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## Epos-GLA-11

### REFRACTORY BILATERAL MALIGNANT GLAUCOMA AFTER TRABECULECTOMY IN A YOUNG SUBJECT WITH SMALL EYES: A CASE REPORT

#### Abstract Title

REFRACTORY BILATERAL MALIGNANT GLAUCOMA AFTER TRABECULECTOMY IN A YOUNG SUBJECT WITH SMALL EYES: A CASE REPORT

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Malignant glaucoma (MG) is a complication following penetrating eye surgery. Short axial length and narrow ICA are among risk factors. Half resolves with drugs, whereas some may be refractory. This report describes a challenging management of refractory MG.

#### Case Illustration

A 32-years-old male with bilateral PACG developed MG after trabeculectomy and MMC application both eyes. Medications alone didn't work. Left eye underwent combined phacoemulsification-IOL implantation-posterior sclerectomy. PAS removed by needling and 5-FU application, IOP reduced by VGI (Virna Glaucoma Implant) implantation, yet ACD was still shallow. Combined anterior vitrectomy-hyaloidozonulectomy-AC reformation controlled the condition. Right eye underwent phacoemulsification-IOL and VGI implantation. Membrane in the tube was removed by NdYAG. Separated AC reformation and anterior vitrectomy improved ACD temporarily before iridectomy opening was covered with membrane. Right eye was finally controlled after combined membranectomy-synechia released and transcorneal zonulohyaloidovitreotomy. The last BCVA of right eye was 6/18, IOP 16 mmHg, ACD VH 3-4, and BCVA of left eye was 6/12, IOP 21 mmHg, ACD VH 3-4.

#### Discussion

MG is caused by aqueous misdirection to posterior segment. Crystalline lens removal and vitrectomy are important to make pathway for the displaced aqueous to flow anteriorly. IOP should be controlled (e.g with VGI) to prevent glaucoma progression. Follow up for the patient should be continued to maintain the IOP and visual function and prevent the recurrency of MG.

#### Conclusion

MG management has been challenging. Half needs surgery and might be refractory. The key is to ensure patent pathway for aqueous humor flow to anterior chamber.

#### Keyword

Malignant glaucoma, aqueous misdirection

#### Category

E-Poster

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## Epos-GLA-12

### A RARE CLINICAL MANIFESTATION OF STURGE-WEBER SYNDROME

#### Abstract Title

A RARE CLINICAL MANIFESTATION OF STURGE-WEBER SYNDROME

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Sturge-Weber Syndrome (SWS) is a rare neurocutaneous disorder with vascular abnormalities which may affect eye, skin and nerve. Glaucoma concurs in 30%–70% of individual with SWS.

#### Case Illustration

A 25-year-old woman was referred by Neurology Department to our outpatient clinic with pain on her left eye, radiating to the head. Red birth marks were present on the left half of her face. Her left eye was growing larger since age 4 months old, during when she also started experiencing recurrent seizure. From physical examination, visual acuity of the right eye was 6/6 and left eye had no light perception. Intraocular pressures of the right and left eye were respectively 16.5 and 23.1 under Latanoprost and Timolol 0.5% bid. Seclusio pupil was found on her left eye which made the posterior segment difficult to visualize. Heterochromic iris and dense episcleral venous plexus were observed on the left eye. We also found right eye temporal hemianopsia on visual field examination. Radiographic evaluation revealed left frontoparietal brain hemiatrophy.

#### Discussion

Seclusio pupil might be a form of the developmental anomaly of anterior segment, and the dense episcleral venous plexus become the main cause of glaucoma presented in this patient. Right temporal hemianopsia was highly related with left frontoparietal hemiatrophy.

#### Conclusion

This case demonstrated rare SWS ocular and skin presentations with brain defect. Multidisciplinary approach and adequate intraocular pressure control were needed to prevent further damage of the disease especially optic nerve function.

#### Keyword

Sturge-Weber Syndrome, seclusio pupil, glaucoma

#### Category

E-Poster

## Epos-GLA-13

### INTRACRANIAL PRESSURE AS RISK FACTOR FOR GLAUCOMA

#### Abstract Title

INTRACRANIAL PRESSURE AS RISK FACTOR FOR GLAUCOMA

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#### Author Institution

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#### Co Author

Fitratul Ilahi ()

#### Abstract Type

Case Report

#### Introduction

Glaucoma is characterized by structural optic nerve head and visual field changes at any Intraocular pressure (IOP). Optic nerve is not only exposed by IOP but also intracranial pressure (ICP), which difference between them and lamina cribrosa/LC related to translaminar pressure gradient (TLPG) which play role in glaucomatous optic neuropathy. Imbalanced TLPG may lead to the optic nerve due to axonal changes. Ventriculoperitoneal (VP) shunt for high ICP can cause imbalance of TLPG. We report a glaucoma case related to hydrocephalus patient who had undergone VP shunt.

#### Case Illustration

A 25th y.o male was admitted to glaucoma clinic in December 10th 2019 with blurry vision on both eyes, hydrocephalus and post VP Shunt history about 1 year ago. Ophthalmology examinations found VA of RE 1/60, LE 1/60, anterior chamber was VH3 on both eyes, IOP of RE 21 mmHg, LE 23 mmHg. Funduscopy examination on both eyes showed CDR 0,8-0,9, pale, and excavatio, arcuata pattern on perimetry. We diagnosed patient as Juvenile Glaucoma. Treatment was Latanaprost once a day on both eyes. Treatment reduced IOP into 15 mmHg (RE) and 17 mmHg (LE), with VA on both eye can still be maintained.

#### Discussion

Hydrocephalus is a condition by increasing ICP, which vp shunt is its' management. ICP related to IOP by involving LC related to TLPG. Targeting IOP is main management to maintain progression of axonal damage.

#### Conclusion

Imbalance of TLPG by involving ICP and IOP can cause axonal damage related to visual field defect and VA. We need consideration of glaucoma for patient with increasing ICP.

#### Keyword

Hydrocephalus, Intraocular Pressure, Translaminar pressure gradient.

#### Category

E-Poster

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## Epos-GLA-14

### Window vision of future generations threatens by Badminton?

#### Abstract Title

Window vision of future generations threatens by Badminton?

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#### Co Author

yuliana hartono Sp.M (Department of Ophthalmology, Faculty of Medicine Sam Ratulangi University)

#### Abstract Type

Case Report

#### Introduction

Badminton can result in few injuries mostly minor and no previous report of perforating eye injury. However, in fact, most parent area unaware of the ocular dangers for their children. It can cause permanently and severely damaged the vision of the future new generation.

#### Case Illustration

A ten-year old boy, presented to the clinic for his blurred vision evaluation after having been hit by badminton racket on his right eye while playing with his younger brother at home 3 day prior. His eyes were closed when he was hit. He felt soreness of the right lid, red eye, flashes and sensitivity of light.

#### Discussion

No history of ocular problems, any other medication and previous eye examination. His visual acuities were 1/60 OD, and 6/6 OS, intraocular pressure were 19 mmHg OD, and 17 mmHg OS. Anterior segment on right eye revealed diffuse hyperemia of the upper eyelid, pain to touch, blepharospasm, mixed injection, cornea was clear, and full blood with large clotting in anterior chamber. Left eye was unremarkable. that is why patient was diagnosed with traumatic hyphema et causa blunt injury of right eye. Irrigation and aspiration was performed 3 day later. Two days after surgery, visual acuity was 6/9 OD and minimal clotting in corneal endothel.

#### Conclusion

Advanced micro surgical treatment is available, but the outcomes of ocular injuries are often unpredictable and sometimes underestimated. Prevention efforts like protective eyewear safety education and awareness of the ocular injuries are important, especially for children.

#### Keyword

Hyphema traumatic, ocular injury in badminton

#### Category

E-Poster

#### Latest Update

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## Epos-GLA-15

### SHORT-TERM SUCCESSFULLY MANAGEMENT THERAPY OF NEOVASCULAR GLAUCOMA IN VOGT- KOYANAGI- HARADA SYNDROME: A CASE REPORT

#### Abstract Title

SHORT-TERM SUCCESSFULLY MANAGEMENT THERAPY OF NEOVASCULAR GLAUCOMA IN VOGT- KOYANAGI- HARADA SYNDROME: A CASE REPORT

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Noro Waspodo (Department of Ophthalmology, Faculty of Medicine, Hasanuddin University)

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#### Abstract Type

Case Report

#### Introduction

Neovascular glaucoma (NVG) is one of many complications in Vogt-Koyanagi-Harada Syndrome (VKHS) patient. It will potentially blind if it is not treated properly.

#### Case Illustration

A – 44 year old female presented to Hasanuddin University Hospital with decreased of vision since four months prior and an intermittent headache. Both eyes visual acuity showed hand movement, with IOP were 53 and 43 mmHg respectively. We found chronic uveitis, vitritis, exudative retinal detachment in both eyes and iris neovascularization only in right eye (RE). Patient received systemic methylprednisolone and carbonic-anhydrase also topical steroid and  $\beta$ -blocker. Exudative retinal detachments resolved in both eyes after management. Iris neovascularization diminished after an intracameral anti VEGF injection. Trabeculectomy with Mitomycin (MMC) performed in both eyes within 1-month interval. Synechiolysis, membranectomy and cataract extraction with implantation intraocular lens performed in LE 2 months later. Best corrected visual acuity (BCVA) in LE improved to 20/30 but decreased to 20/400 in 4 months. During 4 months follow-up, Both eyes IOP remained stable in 16 mmHg and 11 mmHg respectively

#### Discussion

Inflammation management is needed before any surgical procedure. Anti-VEGF injection performed to deteriorate new vessels for transient effect and change in bleb vascularity. Trabeculectomy + MMC performed to enhance filtration and improve long-term bleb function. Visual acuity decreased after 4 months presumably because the chronic recurrent phase of VKHS.

#### Conclusion

Managing ocular complication in VKHS is challenging due to chronic recurrences. An adequate inflammation therapy and comprehensive management are needed for controlling visual outcome and IOP in VKHS patient.

#### Keyword

Vogt-Koyanagi-Harada syndrome, Neovascular glaucoma, anti VEGF

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Submitted

## Epos-GLA-16

### Trabeculectomy and 5-Fluorouracil with Releasable Sutures in The Case of Advance stage Primary Angle Closure Glaucoma

#### Abstract Title

Trabeculectomy and 5-Fluorouracil with Releasable Sutures in The Case of Advance stage Primary Angle Closure Glaucoma

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#### Abstract Type

Case Report

#### Introduction

Advance glaucoma was defined as a glaucoma characterized by a ratio of  $c / d > 0.9$  and / or a field defect within  $10^\circ$  of fixation. loss of central vision in advanced glaucoma increases markedly when IOP is increased above 22 mmHg with medical therapy. Therefore, more progressive measures are needed to prevent deterioration of the optic disc damage. Trabeculectomy remains the most commonly performed glaucoma surgery.

#### Case Illustration

A 54-year-old man presented with a several-month with complaints of blur vision on the right eye, headache and tunnel vision. Visual acuity was 4/60 for the right and NLP for the left eye. IOP in the right eye was 35.7 mmHg and in the left eye 43.3 mmHg. There is decreased light reflex of pupil in both of eyes. Fundoscopy appears cupping ratio of  $c / d > 0.9$  in both eyes, Gonioscopy: grade 1 in all quadrants. In OCT, the RNFL is thinner and defects in the visual field. The patient was treated with antiglaucoma drugs but was inadequate with the maximum treatment so trabeculectomy was planned.

#### Discussion

Discussion: The patient underwent trabeculectomy in the right eye to reduce the IOP which was inadequate with medical therapy. Trabeculectomy is performed by adding 5 Fluorouracil to reduce postoperative conjunctival scarring and improve drainage and using releasable sutures can minimize excessive filtration and allow titration of IOP.

#### Conclusion

Trabeculectomy + 5FU and releasable sutures have been successful treating inadequate IOP elevation in Advance stage PACG.

#### Keyword

Trabeculectomy, Advance stage Angle Closure, Glaucoma

#### Category

E-Poster

#### Latest Update

August 16, 2020

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## Epos-GLA-17

### Neovascular Glaucoma (NVG) Following Penetrating Injury: A Multifaceted Disease

#### Abstract Title

Neovascular Glaucoma (NVG) Following Penetrating Injury: A Multifaceted Disease

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#### Abstract Type

Case Report

#### Introduction

Open globe injury (OGI) is a sight-threatening condition. Prompt management and identifying the potentially devastating complications are pivotal to improve outcomes.

#### Case Illustration

A 43-year-old male presented with left eye pain after he cut metal wires using plier 1 day prior. A metallic foreign body (FB) situated at 8 o'clock, at limbus, perforated cornea and iris were detected during slit-lamp examination. Traumatic mydriasis, sluggish pupillary reaction, and iritis were also noted. The visual acuity (VA) was 1/60. He assessed with OTS 3. Orbital CT was ordered, immediate removal of 15-mm long FB performed. The following day, traumatic cataract had developed. The patient received topical antibiotic, steroid, cycloplegic, and planned for cataract extraction after the inflammation had settled. Patient was non-compliant, he came 3 months later, complained of dull pain in the left eye with VA light perception and intraocular pressure (IOP) 42mmHg. Disperse pigments were noted on endothelium and anterior lens capsule. Rubeosis iridis, iris bombe, and posterior synechiae were also found. From gonioscopy, neovascularization and peripheral anterior synechiae were observed. Ocular ultrasound was normal. Topical and systemic anti-glaucoma medication administered to control IOP. Cataract extraction and intracameral anti-VEGF injection are planned.

#### Discussion

NVG after OGI due to chronic inflammation causing altered aqueous outflow equilibrium and trabecular meshwork obstruction by inflammatory cells. Improving compliance is an issue clinicians must deal with to improve outcomes.

#### Conclusion

OGI is an ocular emergency requiring prompt management and adequate follow-up to prevent complications. NVG is a devastating complication due to broad mechanisms.

#### Keyword

penetrating injury, open globe injury, neovascular glaucoma,

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-GLA-18

### Correlation Between Body Mass Index and Intraocular Pressure at Eye Clinic Mangusada Hospital, Bali

#### Abstract Title

Correlation Between Body Mass Index and Intraocular Pressure at Eye Clinic Mangusada Hospital, Bali

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#### Abstract Type

Research

#### Introduction & Objective

Imbalance in consumption and activities has been major serious health problems nowadays and tend to become obesity. In some studies, obesity has been associated with increasing intraocular pressure, which is a risk factor for glaucoma. This study aims to analyze the correlation between body mass index (BMI) and intraocular pressure in Eye Clinic at Mangusada Hospital.

#### Method

This was a cross sectional study held in Eye Clinic at Mangusada Hospital in May 2020. Inclusion criteria were people aged between 20 - 55 years old, with normal blood pressure (systolic < 139 mmHg, diastolic < 89 mmHg). The exclusion criteria were people who had history of cardiovascular diseases, diagnosed glaucoma before, had contraindication to tonometry use, consumes drug affecting cardiovascular system, and had family history of cardiovascular, kidney, liver, and lung diseases. Body weight was measured with body scale, body height was measured with height meter, BMI was calculated with formula of body weight in kilogram divided by square of body height in meter, blood pressure was measured by Scanner Tensimeter and intraocular pressure was measured with rebound tonometer I-care TA01i. Data was analyzed using Kruskal-Walis and Mann Whitney Test with  $p < 0.05$  as level of significance.

#### Result

The study of 85 subjects found significant difference in intraocular pressure in normoweight, overweight, and obesity subjects. This study also found significant difference in intraocular pressure between normoweight and obesity subjects.

#### Conclusion

Intraocular pressure simultaneously increase with the increasing of body mass index and obesity is probably correlated with higher intraocular pressure.

#### Keyword

body mass index, intraocular pressure, glaucoma

#### Category

E-Poster

#### Latest Update

July 21, 2020

#### Status

Submitted

## Epos-GLA-19

### Clinical Profile of Steroid Induced Glaucoma at Bali Mandara Eye Hospital in 2019

#### Abstract Title

Clinical Profile of Steroid Induced Glaucoma at Bali Mandara Eye Hospital in 2019

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#### Abstract Type

Research

#### Introduction & Objective

Glaucoma is an optic neuropathy characterized by optic disc cupping and visual field loss. In the last decade, the prevalence of glaucoma has increased rapidly. Glaucoma incidence globally is estimated to reach 76 million in 2020 and 111.8 million in 2040. There are many causes of glaucoma, one of which is the use of corticosteroids. Unmonitored use of steroids especially in eye drop formulations is common in situations when it is easily available over-the-counter, resulting in undesirable side effects.

#### Method

Study using cross-sectional and descriptive retrospective method was conducted by using secondary data involving 35 medical records of patients diagnosed with steroid-induced glaucoma in Bali Mandara Eye Hospital, in the period of January to December 2019. Age, gender, steroid type, routes of administration, and duration of steroid administration were recorded from medical records.

#### Result

The demographic characteristics of 35 patients: 20 (57.14%) were male and 15 (42.86%) were female, 11 (31.43%) were elderly >55 years old. The characteristic of steroids used: 30 (87.71%) used steroid eye drops, 5 (14.29%) took oral steroids. In patients with eye drops, most of them (77.14%) used Dexamethasone eye drops, and in oral use, 3 (8.57%) took Methylprednisolone, and 2 (5.71%) took Dexamethasone. 34.39% symptomatic after 1 year of steroid use.

#### Conclusion

Steroid-induced glaucoma can occur in both male or female, in all age groups, elderly and children have a higher risk. Most cases occur from topical steroids. Duration of administration varies from 1 week to 5 years. Steroid-induced glaucoma is an avoidable irreversible blindness, therefore the use of steroids must be judicious, self-medication must be avoided, doctor must provide education to patients who are given steroid therapy, if possible steroids are replaced with nonsteroidal anti-inflammatory drugs, and patients who receive steroid therapy should be monitored regularly.

#### Keyword

Steroid, Glaucoma, Steroid-induced Glaucoma

#### Category

E-Poster

#### Latest Update

July 22, 2020

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## Epos-GLA-20

### DIABETES MELLITUS SEBAGAI FAKTOR RISIKO TERJADINYA GLAUKOMA

#### Abstract Title

DIABETES MELLITUS SEBAGAI FAKTOR RISIKO TERJADINYA GLAUKOMA

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#### Abstract Type

Research

#### Introduction & Objective

Glaukoma merupakan salah satu penyebab kebutaan di Indonesia. Beberapa penyakit sistemik dapat menjadi faktor risiko terjadinya glaukoma antara lain Diabetes Mellitus (DM). Kondisi hiperglikemia pada DM akan meningkatkan aktivitas NADPH oksidase yang selanjutnya dapat meningkatkan Reactive Oxygen Species (ROS) dan stres oksidatif dalam tubuh. Pada tahap lanjut dapat menyebabkan kerusakan saraf optik dan menimbulkan glaukoma. Penelitian ini bertujuan untuk mengetahui faktor risiko DM terhadap kejadian glaukoma.

#### Method

Penelitian ini merupakan penelitian observasional yang bersifat deskriptif-analitik secara retrospektif, dengan desain penelitian cross sectional. Kriteria sampel adalah pasien laki-laki dan wanita yang berusia lebih dari 40 tahun yang mengalami rawat inap dan rawat jalan di poli mata RSUD Kota Yogyakarta pada periode bulan Januari – Desember 2019. Pengambilan data dilakukan dengan menggunakan data sekunder berupa rekam medis. Data kemudian dianalisis dengan menggunakan uji korelatif Chi-Square.

#### Result

Hasil penelitian terkumpul 170 pasien yang terdiri dari 78 laki-laki (45,9%) dan 92 wanita (54,1%). Dari 170 sampel menunjukkan sebanyak 50 (29,4%) pasien terdiagnosis glaukoma dan 120 (70,6%) pasien terdiagnosis non glaukoma. Sedangkan sebanyak 77 (45,3%) pasien memiliki riwayat diabetes melitus dan 93 (54,7%) pasien tidak memiliki riwayat diabetes melitus. Hasil uji korelatif dengan Chi-Square menunjukkan terdapat hubungan yang signifikan antara riwayat Diabetes Mellitus dengan kejadian glaukoma di RSUD Kota Yogyakarta, dengan tingkat signifikansi yaitu ( $p=0,000$ ) dengan nilai Risiko Relatif (RR) 12,75.

#### Conclusion

Diabetes mellitus memiliki hubungan yang signifikan terhadap kejadian glaukoma dengan risiko 12x lipat dibanding orang normal.

#### Keyword

Glaukoma, Diabetes Mellitus, risiko

#### Category

E-Poster

#### Latest Update

August 05, 2020

#### Status

Submitted

## Epos-GLA-21

### CORRELATION BETWEEN GLAUCOMA AND CIRCADIAN RHYTHM SLEEP DISORDER

#### Abstract Title

CORRELATION BETWEEN GLAUCOMA AND CIRCADIAN RHYTHM SLEEP DISORDER

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#### Abstract Type

Research

#### Introduction & Objective

Glaucoma is an optical neuropathy that mostly caused by high intraocular pressure with decreasing visual field along with optic nerve atrophy. This ocular degenerative disease affects the retinal ganglion cells (RGCs) more specifically intrinsically photosensitive retinal ganglion cells (ipRGCs) which express melanopsin. Melanopsin indirectly signal secretion of melatonin that reset and control the circadian rhythm of mammals (including human). ipRGCs form pathways that directly innervate the Suprachiasmatic nucleus (SCN) and mediate non- image forming function of the eyes. Including photoentrainment of circadian rhythm to the light- dark cycle. Degeneration of RGCs will somehow alter the circadian rhythm thus individual's sleep quality will be altered and disturbed. The objective of the research is to find the correlation between glaucoma and circadian rhythm related sleep disturbance in order to provide additional and holistic approach in the management of glaucoma thus giving the patients a better life quality

#### Method

Pittsburgh Sleep Quality Index (PSQI) used as sleep quality measurement and the research method was analytical observational cross- sectional study. Research subject were 33 peoples which divided into 2 groups, first group was individual with glaucoma and later was the control group in which the subjects have no glaucoma. PSQI scored was measured and compared between 2 groups. Data was then analyzed using biserial correlation with  $r = 0.05$

#### Result

The results of the study showed Correlation coefficient was  $-0.750$  with P value

#### Conclusion

Based on the result, there is a significantly strong correlation between glaucoma and PSQI score which define sleep disturbance levels

#### Keyword

Glaucoma, Circadian rhythm sleep disorder, PSQI score

#### Category

E-Poster

#### Latest Update

August 13, 2020

#### Status

Approved As E-Poster

## Epos-GLA-22

### Efficacy of Micropulse Transscleral Cyclophotocoagulation (MP-TSCPC) in Treating Refractory Glaucoma: A Systematic Review

#### Abstract Title

Efficacy of Micropulse Transscleral Cyclophotocoagulation (MP-TSCPC) in Treating Refractory Glaucoma: A Systematic Review

#### First Author

Dhiny Lidinillah

#### Author Institution

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#### Co Author

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Dearaini (Universitas Padjadjaran)

#### Abstract Type

Research

#### Introduction & Objective

Glaucoma is the second leading cause of blindness. Managing intraocular pressure (IOP) plays a crucial role in glaucoma treatment. Laser treatment is an option to treat patients with refractory glaucoma. Micropulse transscleral cyclophotocoagulation (MP-TSCPC) is a novel laser treatment that has been proposed to reduce collateral damage and adverse effects. Our study will discuss the effectiveness of MP-TSCPC in refractory glaucoma patients.

#### Method

Systematic review was performed using "MP-TSCPC", "micropulse transscleral cyclophotocoagulation" and "glaucoma" as Keywords to identify published articles between years 2015-2020 on Pubmed, Cochrane Library, and Google Scholar. Full text articles written in English that include refractory glaucoma patients underwent MP-TSCPC as subjects and IOP reduction as improvement criteria will be reviewed. We exclude studies that were not original articles, did not include monthly follow-ups, and did not include IOP reduction in succession rate.

#### Result

Two interventional studies and one case series were collected. 232 eyes diagnosed with refractory glaucoma. IOP reduction was significant in all of the studies within 1 month post treatment reduced by no less than 27%. The IOP reduction after 12 months of follow up are 41.83%, 36%, and 30.3% consecutively. The mean reduction in glaucoma medications used was 36.37% after 12 months of treatment. The success rate was defined as 20% of reduction of the baseline IOP. The most common complications are hypotony and inflammation of the anterior chamber, but the symptoms are mild and resolved within weeks.

#### Conclusion

MP-TSCPC is effective in treating refractory glaucoma. However, it has not been performed in many patients yet.

#### Keyword

Micropulse transscleral cyclophotocoagulation; MP-TSCPC; glaucoma

#### Category

E-Poster

#### Latest Update

August 13, 2020

#### Status

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## Epos-GLA-23

### THE EFFECT OF AERIAL YOGA TO INTRAOCULAR PRESSURE

#### Abstract Title

THE EFFECT OF AERIAL YOGA TO INTRAOCULAR PRESSURE

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#### Abstract Type

Research

#### Introduction & Objective

Yoga has many benefits for health but its side effect needs to be considered. The headstand position in yoga may increase intraocular pressure (IOP). Increased IOP may increase the risk of glaucoma. Increased IOP is associated with high fluctuation, ones of the many factors affecting IOP fluctuation are activities and sports. A slight increase in IOP for a short time is not a danger for normal individuals, but it is dangerous for glaucoma patients. This study was aimed to analyze the effect of aerial yoga towards intraocular pressure

#### Method

Analytic observation with cohort approach at Oryza Gym and Ading Yoga & Pilates Studio Semarang. Thirty six 20-30 years old qualified females were chosen as subjects. Intraocular pressure measurement were done before intervention and after 60 minutes intervention with Tonopen XL. Intraocular pressure differences before and after intervention were analyzed by Wilcoxon test

#### Result

The mean IOP measurements before exercise  $19.34 \pm 2.75$  mmHg with lowest value 14 mmHg and the highest value 25 mmHg. The mean IOP measurements after exercise  $16.92 \pm 2.60$  mmHg with 13 mmHg lowest value and the highest value 22 mmHg. Intraocular pressure after exercise is lower than the baseline IOP, with a significant difference ( $p = 0.000$ )

#### Conclusion

Aerial yoga significantly lowered IOP

#### Keyword

Aerial yoga, Intraocular pressure (IOP)

#### Category

E-Poster

#### Latest Update

August 14, 2020

#### Status

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## Epos-GLA-24

### The Effectivity of Selective Laser Trabeculoplasty (SLT) in Treating Normal Tension Glaucoma (NTG): A Systematic Review

#### Abstract Title

The Effectivity of Selective Laser Trabeculoplasty (SLT) in Treating Normal Tension Glaucoma (NTG): A Systematic Review

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#### Abstract Type

Research

#### Introduction & Objective

Normal tension glaucoma (NTG) is a progressive optic neuropathy with IOP that never exceeds 21 mmHg. In Asia, NTG is contributed to 52%-92% cases of the primary open angle glaucoma (POAG). A reduction of intraocular pressure (IOP) is the main goal of glaucoma treatment. Selective laser trabeculoplasty (SLT) is a well-established procedure that has been shown to be effective in treating POAG. However, evidence regarding the efficacy of SLT in NTG is minimal. Therefore, the purpose of this study is to investigate the efficacy of SLT in treating NTG.

#### Method

Literature searches were conducted in Pubmed, Cochrane and Scholar for articles published within the past 5 years using "SLT", "selective laser trabeculoplasty", "NTG" and "normal tension glaucoma" as Keywords. Case reports and review articles were excluded. Full text articles written in English that included NTG patients underwent SLT will be reviewed.

#### Result

We included four cohort prospective studies and 1 randomized control trial study of NTG patients treated by SLT. IOP were significantly lower in all of the studies. IOP reduction was ranging from 17.0% to 22% by 1 month after SLT. One study, which defined success as IOP reduction  $\geq 20\%$  by Goldmann applanation tonometry, considered SLT to be successful in 44% patients.

#### Conclusion

In this systematic review, we found that SLT effectively and significantly lowered IOP in NTG patients. Further research, particularly prospective cohort studies with larger sample is needed.

#### Keyword

selective laser trabeculoplasty, SLT, normal tension glaucoma", NTG

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Approved As E-Poster

## Epos-NO-01

### Binocular Diplopia in Partial Unilateral Oculomotor Nerve (OCN) Palsy: A Case Report

#### Abstract Title

Binocular Diplopia in Partial Unilateral Oculomotor Nerve (OCN) Palsy: A Case Report

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#### Abstract Type

Case Report

#### Introduction

Binocular diplopia is mostly caused by oculomotor nerve (OCN) palsy. Acquired oculomotor nerve palsy has varied etiologies, therefore managing oculomotor nerve palsy is challenging and depends on the cause, motility, and presence of amblyopia.

#### Case Illustration

A 49-year-old male patient presented with the first episode of binocular diplopia. He had clinical histories of cardiac catheterization and dyslipidemia with routine medications. Ophthalmology examination showed exotropia of the left eye with no pupillary involvement, and isolated paresis of left OCN – the medial rectus muscle. Laboratory studies showed high level of total cholesterol and low-density lipoprotein (LDL). We found her left OCN was in contact with left P2A posterior communicating artery (PCA) segment, suggesting a neurovascular conflict during magnetic resonance imaging. Cranial neuropathy was suspected, therefore steroid along with antiplatelet and statin were given. Each eye was occluded with patch every 3 hours alternately during hospital treatment. The symptoms improved, medications were maintained, and the patient had no complaint in the following 3 months after the event.

#### Discussion

The most common cause of partial third nerve palsy is microvascular, frequently associated with diabetes mellitus, hypertension and dyslipidemia. Vascular anomalies of PCA could compress the oculomotor nerve, inducing irritation of the nerve.

#### Conclusion

Binocular diplopia caused by oculomotor nerve palsy has numerous etiologies. This case suggests neurovascular conflict as the cause of diplopia due to partial unilateral oculomotor nerve palsy.

#### Keyword

diplopia, oculomotor nerve palsy, neurovascular

#### Category

E-Poster

#### Latest Update

July 23, 2020

#### Status

Approved As E-Poster

## Epos-NO-02

### Late Ocular Manifestation of Traumatic Carotid-Cavernous Fistula – A case report

#### Abstract Title

Late Ocular Manifestation of Traumatic Carotid-Cavernous Fistula – A case report

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#### Abstract Type

Case Report

#### Introduction

To report a case of ocular manifestation of Carotid-Cavernous Fistula that appeared 5 months after head injury

#### Case Illustration

A 23 years old man, presented with redness and swelling of LE for 2 weeks. He complained blurred vision. He revealed a history of head injury 5 month ago and physiotherapy for 3 month after injury. Brain CT scan showed multiple fracture at basis cranii and facial bone, intracerebral hemorrhages, and hematosinus. Cerebral angiography revealed a direct shunt from lateral wall of cavernous segment of left ICA to the cavernous sinus and a retrograde flow into the SOV. On examination, BCVA RE was 1.0, LE was NLP, the other exam of RE within normal limits. IOP LE 24,3mmHg. The LE measured 26 mm with exophthalmometer, extraocular movement limited on abduction and depression. We found lagofthalmus, bruit at left supraorbital and left temporal, intact corneal sensation, severe chemosis conjunctiva inferior, dilated vessels, anisocoria with no pupillary reflex. Funduscopy show primary optic atrophy, no vascular dilatation, cotton wool spots or hemorrhages.

#### Discussion

The patient was diagnosed unilateral Carotid-cavernous fistula type A and primary optic atrophy. Patients treated with acetazolamide, topical  $\beta$ -blocker, antibiotics, artificial tears and cold compress. After a week, patient showed improvement ocular sign and symptom. Patients underwent endovascular embolization of the CCF using coils and angiography revealed a disrupted of the fistula.

#### Conclusion

Ophthalmology examination must be performed after head injury for rule out CCF to prevent late diagnostic. Prognosis depends on severity and right time for treatment.

#### Keyword

Carotid-cavernous fistula, proptosis, bruit

#### Category

E-Poster

#### Latest Update

August 11, 2020

#### Status

Approved As E-Poster

## Epos-NO-03

### ONE-AND-A-HALF SYNDROME AND ITS SPECTRUM DISORDERS: A CASE REPORT

#### Abstract Title

ONE-AND-A-HALF SYNDROME AND ITS SPECTRUM DISORDERS: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

One-and-a-half syndrome is a syndrome characterized by combination of ipsilateral conjugate horizontal gaze palsy (one) and ipsilateral internuclear ophthalmoplegia (INO) (a half). On the basis of one-and-a-half syndrome, there are a series of related rare syndromes called the one-and-a-half syndrome spectrum disorders.

#### Case Illustration

A 50-year-old woman presented with a chief complaint of double vision. The patient had a history of stroke six months before presentation. Ophthalmologic examination showed horizontal gaze palsy in left eye and internuclear ophthalmoplegia in right eye. Neurological examination showed right hemiparesis followed by ataxia and accompanied by central VII and XII nerve palsies. Head MRI showed multiple lesion scattered in pons, cerebellum, medulla oblongata, and basal ganglia. She was diagnosed with one-and-a-half syndrome due to suspected lesion in pons, accompanied by stroke sequelae, hypertension, and dyslipidemia. Systemic regulation, oral anticoagulant, and oral neuroprotective agents were given to this patient.

#### Discussion

The one-and-a-half syndrome is usually due to unilateral lesion affecting ipsilateral PPRF or abducens nucleus and ipsilateral MLF. The lesion may be caused by brainstem infarction as we can find in this patient. There were associated symptoms such as difficulty in swallowing, right hemiparesis, and ataxia. All of these symptoms can be called as nine syndrome.

#### Conclusion

The diagnosis of one-and-a-half syndrome and its spectrum disorders rely on distinctive clinical symptoms and neuroanatomy. Other associated symptoms including visual impairment and fine motor deficits may contribute to locating the lesions. The treatment depends on the causes of the syndrome.

#### Keyword

One-and-a-half syndrome, nine syndrome, brainstem

#### Category

E-Poster

#### Latest Update

August 11, 2020

#### Status

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## Epos-NO-04

### VIRAL INFECTION IN UNILATERAL ATYPICAL PEDIATRIC OPTIC NEURITIS

#### Abstract Title

VIRAL INFECTION IN UNILATERAL ATYPICAL PEDIATRIC OPTIC NEURITIS

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#### Abstract Type

Case Report

#### Introduction

Pediatric optic neuritis differs from adult in some clinical characteristics such as history of presumed viral infection 1-2 weeks.

#### Case Illustration

Female, 14 year old came with a chief complaint of sudden blurred vision 2 days before admitted. On ophthalmologic examination, the visual acuity on the right eye was 1.0, left eye was hand movement. There was a relative afferent pupillary defect (RAPD) grade III in the left eye with left optic disc swelling. Patient was diagnosed with atypical optic neuritis with suspicion of infection as etiologic. She also had Bell's palsy since 4 years ago. She was treated with intravenous methylprednisolone for 3 days with 4x250mg dosage, followed by oral methylprednisolone 1 mg/kgBW/day. On 10th day of treatment, the visual acuity on the left eye became 1.0F2 with good color perception and contrast sensitivity. The laboratory result in reactivity of both anti IgM and IgG of cytomegalovirus, rubella, and herpes simplex virus.

#### Discussion

Presumed viral infection, optic disc swelling, high sensitivity and dependency in steroid treatment were characteristics of pediatric optic neuritis we found in this case. Even though up until now there is not any randomized clinical trial for treatment in pediatric patients, the visual prognosis is relatively good with steroid treatment.

#### Conclusion

Steroid treatment in pediatric patients could result in good visual outcome. Etiology work-up is needed to treat the underlying disease. Visual prognosis is good but there is still risk of conversion to Multiple Sclerosis.

#### Keyword

optic neuritis, pediatric optic neuritis, infectious optic neuritis

#### Category

E-Poster

#### Latest Update

August 12, 2020

#### Status

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## Epos-NO-05

### Atypical Perimetry Finding in Patient with Pituitary Macroadenoma

#### Abstract Title

Atypical Perimetry Finding in Patient with Pituitary Macroadenoma

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#### Abstract Type

Case Report

#### Introduction

The most common lesions that cause chiasm compression are pituitary adenomas. The purpose of this study was to report a case of atypical perimetry in patient with pituitary macroadenoma.

#### Case Illustration

A 38-years-old female patient presented with gradual loss left visual field in both eyes for 2 years, with headache, nausea, galactorrhea and amenorrhea. She had no underlying diseases such as diabetes or hypertension. Her visual acuity was 6/60 right and 6/9 left, she had no relative afferent pupillary defect, and her ocular movements were normal. Fundus examination of the left eye was within normal limits, but the right eye showed optic atrophy. Humphrey visual field testing revealed general reduction in right eye and temporal defect in left eye. On investigation CT-scan revealed intra-suprasellar turcica mass size in 2x2,6x2,7cm. She was diagnosed pituitary macroadenoma with atypical visual field defect and referred to neurosurgeon for further examination and treatment.

#### Discussion

The visual deficits associated with pituitary adenoma depend on the size, location, and hormonal activity of the tumor as well as the position of the chiasm as it relates to the sella turcica. According to a recent study, the tumor volume also affects the severity of the visual field defect. Profound anamnesis, visual examination, and neuroimaging, revealed that this patient had pituitary macroadenoma with atypical visual field defect.

#### Conclusion

Pituitary macroadenoma with general reduction in one eye and temporal defect in other eye are extremely rare. A thorough anamnesis and visual examination play an important role in early identification of the pituitary lesions.

#### Keyword

Optic chiasm, Pituitary adenoma, Visual field defect.

#### Category

E-Poster

#### Latest Update

August 14, 2020

#### Status

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## Epos-NO-06

### BILATERAL OPTIC NERVE HEAD SWELLING IN PEDIATRIC LEUKEMIC PATIENT: OPTIC NERVE INFILTRATION OR OPTIC NEURITIS?

#### Abstract Title

BILATERAL OPTIC NERVE HEAD SWELLING IN PEDIATRIC LEUKEMIC PATIENT: OPTIC NERVE INFILTRATION OR OPTIC NEURITIS?

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#### Abstract Type

Case Report

#### Introduction

Acute lymphoblastic leukemia (ALL) is the most common childhood malignancy. Ocular involvement in ALL were seen in 22.12% cases with 1.4% infiltrated the optic nerve. We describe challenging case of leukemic optic nerve infiltration as a rare site of initial relapse.

#### Case Illustration

Eight years old girl was referred with sudden bilateral blindness for a month. She was in 10 months remission for ALL with unremarkable bone marrow (BM) analysis. Orbital CT scan reported bilateral thickening with contrast enhancement on optic nerve suggestive of optic neuritis. She received steroid for optic neuritis without improvement at previous hospital. Our examination revealed no light perception, fixed dilated pupil, and clear vitreous on both eyes. Funduscopic evaluation showed optic nerve edema with tortuous dilated veins and flame-shaped hemorrhages. We suspected bilateral leukemic optic nerve infiltration and consulted her to pediatric oncologist and radiotherapy for immediate treatment. She was scheduled for cytological analysis of cerebrospinal fluid (CSF) and BM and also brain MRI to evaluate intracranial involvement. Unfortunately, her systemic condition deteriorated and could not survive.

#### Discussion

Optic nerve edema and vision loss with enhancement and thickening of optic nerve on imaging could occur in optic nerve infiltration and optic neuritis. Bone marrow and CSF examinations are required to distinguished them. Orbital radiation could restore vision when initiated promptly before irreversible optic damage occurred.

#### Conclusion

Optic nerve infiltration has to be considered in patient with leukemia. Early detection of relapse and prompt multidisciplinary treatment are required to prevent irreversible visual loss as well as morbidity and mortality.

#### Keyword

Optic nerve infiltration, leukemia, vision loss

#### Category

E-Poster

#### Latest Update

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## Epos-NO-07

### The Concurrent Graves' Ophthalmopathy and Ocular Myasthenia Gravis : A Rare Case

#### Abstract Title

The Concurrent Graves' Ophthalmopathy and Ocular Myasthenia Gravis : A Rare Case

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#### Abstract Type

Case Report

#### Introduction

To raise the awareness of clinicians about the possibilities concomitant of Graves' ophthalmopathy and ocular myasthenia gravis (MG).

#### Case Illustration

A 49-year-old female showed ptosis and proptosis at the same time. It was preceded with systemic manifestation of hyperthyroidism, so she was treated with thyrozol and Propylthiouracil. Harvey-Masland test revealed positive myasthenia gravis, so she was given pyridostigmine. Ophthalmological examinations revealed eye lid retraction and ptosis on right eye, and proptosis on left eye. Right eye movements were restricted to all direction beside up gaze and down gaze. Left eye movements were restricted to superior, inferior, supero-temporal, infero-temporal, and medial. Diplopia was confirmed by WFDT. Orbital MRI without contrast showed there were thickening of right ocular medial rectus muscle belly and left superior and inferior rectus muscle, without tendinous insertion involvement. Anti-acetylcholine receptor binding and acetylcholine receptor blocking autoantibody were in normal level. Methylprednisolone 48 mg/day was given initially and tapered off into 16 mg/day. At the moment, she only consumed pyridostigmine, methylprednisolone, and celecoxib which were given by the neurologist to control her myasthenia gravis.

#### Discussion

A strong suspicion of myasthenia gravis should be considered while dealing with parallel scenarios. Restriction of extraocular eye muscles and diplopia were caused by Graves' ophthalmopathy and ocular MG.

#### Conclusion

The coexistence of both diseases has prognostic relevance in mild expression of MG. The association of both diseases needs further immunological and genetic studies to verify the hypotheses of immunological interaction and genetic.

#### Keyword

Graves' ophthalmopathy, ocular myasthenia gravis, eye motility

#### Category

E-Poster

#### Latest Update

August 14, 2020

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## Epos-NO-08

### TORCH ASSOCIATED NEURORETINITIS: CASE SERIES

#### Abstract Title

TORCH ASSOCIATED NEURORETINITIS: CASE SERIES

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#### Abstract Type

Case Report

#### Introduction

Neuroretinitis is a clinical entity characterized by an acute loss of vision associated with disc edema and a star pattern of exudates in the macula. This case series describe features of neuroretinitis associated TORCH infection with good visual acuity after treatment.

#### Case Illustration

We report 3 cases of patients who came with decreased vision due to neuroretinitis which fundus examination characterized by optic disc hyperemia with macular star. Positive TORCH infections were detected. We treated the patient with pulse steroid therapy based on Optic Neuritis Treatment Trial with 1 gram methylprednisolone (case 1 and case 2) and 500 mg methylprednisolone (case 3) for three days then tapering off, combined with clindamycin (case 1 and case 2). The visual acuity improved in several weeks after treatment, while the disc edema and macular star decreased.

#### Discussion

Neuroretinitis causes can be divided into idiopathic, infectious and recurrent. One of the causes of neuroretinitis infection is TORCH especially due to toxoplasmosis and cytomegalovirus. Toxoplasmosis can cause atypical neuroretinitis even it was rare condition, while cytomegalovirus can cause neuroretinitis due to primary infection of the optic nerve or secondary involvement through spread of the infection from adjacent areas of the retina.

#### Conclusion

Neuroretinitis can result from a number of infectious and noninfectious causes. The clinicians should recognize the disease and determine the underlying etiology to ensure the best possible treatment and visual prognosis for the patient. Although toxoplasmosis neuroretinitis is rare, it should be considered in the differential diagnoses of neuroretinitis

#### Keyword

Neuroretinitis, TORCH infection, pulsed steroid therapy

#### Category

E-Poster

#### Latest Update

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## Epos-NO-09

### PANCOAST TUMOUR PRESENTING PREGANGLIONIC HORNER'S SYNDROME IN A 39 YEAR OLD MAN : A CASE REPORT

#### **Abstract Title**

PANCOAST TUMOUR PRESENTING PREGANGLIONIC HORNER'S SYNDROME IN A 39 YEAR OLD MAN : A CASE REPORT

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#### **Abstract Type**

Case Report

#### **Introduction**

Horner's syndrome is characterized by myosis, unilateral eyelid ptosis, with or without facial anhidrosis and vascular dilatation of one half of the face resulting from damaged ipsilateral cervical sympathetic chain. Tumor of the superior lung may invade the ribs, subclavian vessels, brachial plexus, stellate ganglion and adjacent vertebral bodies resulting in characteristic clinical features including Horner's syndrome.

#### **Case Illustration**

A 39 year old man was admitted to emergency department due to shortness of breath and consulted to the ophthalmology department with upper eyelid ptosis. Patient was diagnosed with Pancoast tumour and pleural effusion by pulmonology department. Chest X Ray and CT scan thorax examination revealed lung cancer in apex lung with marked pleural effusion. There was 2 mm left-sided ptosis. Left pupil was smaller than right pupil and greater seen in dim light. Obvious anhidrosis and sensory deficit on left side of face until left shoulder. Patient was diagnosed with second-order (preganglion) Horner's syndrome following lesion in the superior sulcus (Pancoast tumour).

#### **Discussion**

Involvement of preganglionic fibers in apical lung tumour produces the features of Horner's syndrome. Damage to ipsilateral oculosympathetic pathway and invasion to preganglionic neurons exiting the ventral spinal roots inhibit the neurotransmitter. These fibres arch over the apex of the lung and ascend in the cervical sympathetic chain to the superior cervical ganglion

#### **Conclusion**

This case involved clinical presentation of Horner syndrome that all resulting from damage to the ipsilateral oculosympathetic pathway

#### **Keyword**

Horner's syndrome, Pancoast tumour

#### **Category**

E-Poster

#### **Latest Update**

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## Epos-NO-10

### Vision Recovery In Cortical Blindness Patient After Scalp Acupuncture Treatment

#### **Abstract Title**

Vision Recovery In Cortical Blindness Patient After Scalp Acupuncture Treatment

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#### **Abstract Type**

Case Report

#### **Introduction**

We report a case of visual recovery in a patient with Cortical Blindness (CB) caused by hemorrhagic stroke. Visual recovery and independent mobility was achieved after scalp acupuncture (SA) treatment.

#### **Case Illustration**

A 45 years old man with CB caused by bilateral occipital lobe lesions underwent SA treatment for his vision loss. SA treatment was performed twice weekly on a scalp area correspondend with the visual area, and at other acupuncture points. Each SA session was 30 minutes long. Total of 15 SA sessions were performed. He returned to his home in Medan and was referred to a senior acupuncturist to continue his SA treatments.

#### **Discussion**

The treatment started at 2 months after stroke with an initial Visual Acuity (VA) of Hand Movement on both eyes. On the 3rd session he started seeing outlines ; on 7th, VA of 1.5/60 was achieved and total color blindness was noted. Color vision gradually recovered starting from red and on 13th session: blue. On 15th, VA of 2.5/60 and independent mobility was achieved. It was noted that the patient was unable to read letters or numbers on Snellen Charts, although he could recognize there was something on display

#### **Conclusion**

Probability for visual recovery on CB patients from spontaneous stroke is very poor. Only non stroke causes have up to 65% chances of recovery. Visual recovery after SA treatment on this patient could be used as basis for further research.

#### **Keyword**

Vision recovery ; Cortical blindness ; Scalp Acupuncture

#### **Category**

E-Poster

#### **Latest Update**

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#### **Status**

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## Epos-NO-11

### Eight-and-a-half syndrome treated with Stem Cell Therapy: Are we there yet? A Case Report

#### Abstract Title

Eight-and-a-half syndrome treated with Stem Cell Therapy: Are we there yet? A Case Report

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#### Abstract Type

Case Report

#### Introduction

One-and-a-half syndrome presents a combination of ipsilateral conjugate horizontal gaze palsy and ipsilateral internuclear ophthalmoplegia. Seven nerve palsy makes these symptoms are termed eight-and-a-half syndrome. We describe a rare case of eight-and-a-half syndrome due to ischemic stroke and the use of stem cell therapy

#### Case Illustration

A 65-year-old male presented with double vision since one month. He had two cerebrovascular events prior to the symptoms and background history of atrial fibrillation. Slight esotropia, right horizontal gaze palsy, incomplete adduction of the right eye, gaze-evoked nystagmus to the left side, right-sided weakness of both facial and extremities were noted. Visual field impairment was also detected. The MRI revealed left temporoparietal and pontine infarcts. Immediate thrombolysis and thrombectomy were already done, however the symptoms did not improve. Diplopia and lagophthalmos were treated conservatively. Three months later, patient underwent intravenous and intrathecal stem cell therapy. Improvement started one week after the therapy with gained motoric power, followed by resolved horizontal gaze palsy and improved visual field thereafter

#### Discussion

Thrombolysis and thrombectomy is the only validated therapeutic strategy for ischemic stroke. Neurorestorative stem cell therapy has been the focus of interest in regenerating nerve function. Favorable results of stem cell therapy were markedly seen in chronic phase. This could be the treatment option to treat all symptoms especially for patient with high morbidity

#### Conclusion

Early recognition and prompt treatment of ischemic stroke is recommended to decrease the morbidity. Stem cell therapy could be potential treatment for eight-and-a-half syndrome associated with ischemic stroke

#### Keyword

Eight-and-a-half syndrome; stem cell therapy; ischemic stroke

#### Category

E-Poster

#### Latest Update

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## Epos-NO-12

### OPHTHALMOPLEGIA AND BLINDNESS AFTER SEPTIC CAVERNOUS SINUS THROMBOSIS AS COMPLICATIONS OF NASAL FURUNCLE

#### Abstract Title

OPHTHALMOPLEGIA AND BLINDNESS AFTER SEPTIC CAVERNOUS SINUS THROMBOSIS AS COMPLICATIONS OF NASAL FURUNCLE

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#### Abstract Type

Case Report

#### Introduction

Cavernous sinus thrombosis is a rare condition that leads to an increased chance of the delay in diagnosis and treatment. Cavernous sinus thrombosis results in high mortality and morbidity rates if not treated immediately.

#### Case Illustration

A 3-year-old boy with a history of nasal furuncle presented blindness in the right eye and neurological deficits including ophthalmoplegia in both eyes and paraparesis. Cavernous sinus thrombosis was diagnosed by a history of typical clinical symptoms in the early infection. CT scan examination revealed indirect signs of cavernous sinus thrombosis. In the early phase of infection, he received oral medication but inadequate to manage the infection.

#### Discussion

The cavernous sinus is a vital structure as a pathway for the internal carotid artery and cranial nerves III, IV, V, VI. The most common signs of cavernous sinus thrombosis are associated with damage to the nerves that traverse the cavernous sinuses including ptosis, ophthalmoplegia, diplopia, and paresthesia. Cavernous sinus thrombosis should be diagnosed and treated with aggressive treatment at the early stage of infection. Cavernous sinus thrombosis is diagnosed by typical clinical manifestations and imaging technologies by direct and indirect signs of cavernous sinus thrombosis. Treatment guidelines are challenging to develop because cavernous sinus thrombosis is rare.

#### Conclusion

The nasal furuncle may progress toward cavernous sinus thrombosis resulting in fatal complications. Early diagnosis and adequate empiric treatment are needed to avoid various complications.

#### Keyword

ophthalmoplegia, cavernous sinus thrombosis, nasal furuncle.

#### Category

E-Poster

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## Epos-NO-13

### TONIC PUPIL IN A 56 YEAR OLD WOMAN FOLLOWING HERPES ZOSTER OPHTHALMICUS : CASE REPORT

#### Abstract Title

TONIC PUPIL IN A 56 YEAR OLD WOMAN FOLLOWING HERPES ZOSTER OPHTHALMICUS : CASE REPORT

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Tonic Pupil is a disorder in which there is parasympathetic denervation of the afflicted pupil resulting in a poor light but better and tonic near constriction. The etiology commonly caused by viral infection, trauma and other potential cause. Herpes Zoster Ophthalmicus is an ocular disease caused by the varicella zoster virus reactivation in a dermatomal distribution of the trigeminal nerve shared by the eye and ocular.

#### Case Illustration

A 56 year old woman complaints vesicles in left palpebra and left ocular pain for three days before hospital admission. Slitlamp examination showed punctate defect in inferonasal cornea and anisocoria, irregular shape in left pupil poorly reacted to light with segmental palsy. Patient develop light-near dissociation of the pupil by which the near accommodation produced more miosis compared to response light. Hutchinson sign was found.

#### Discussion

Tonic pupil following damage to the parasympathetic ciliary ganglion, reinnervation and up regulation of the post-synaptic receptors occurs, leading to denervation supersensitivity. Ciliary ganglionitis in HZO, the light fibres, the near fibres, and the dilator fibres can be affected differentially. The results in an efferent pupillary defect manifested as poor light reflex in the affected eye. The accommodation reflex is delayed due to the differential involvement of the fibres that carry convergence across the ciliary ganglion.

#### Conclusion

Tonic pupil is uncommon ocular complication in HZO indicates an abnormality of the parasympathetic system with consequence midriasis due to antibody and viral invasion to parasympathetic fiber of pupil. Virulence of VZV and the immune Status of the host are primary factors

#### Keyword

Hepes Zoster Ophtalmicus , Anisocoria, Tonic Pupil

#### Category

E-Poster

#### Latest Update

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## Epos-NO-14

### Bilateral Ophthalmoplegia with Migraine in Children

#### Abstract Title

Bilateral Ophthalmoplegia with Migraine in Children

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Bilateral ophthalmoplegia with migraine in children is a rare case that characterized by recurrent attacks of migraine with paresis one or more ocular cranial nerves.

#### Case Illustration

Boy, 9 y.o came to Dr M Djamil Hospital, presented with bilateral ophthalmoplegia, ptosis and glare for 1 weeks. It was associated with migraine headache, nausea and vomiting. He denied having fever, trauma, tinnitus, or limb weakness. There was no family history of similar disease. Ophthalmologic examinations were paresis of all gaze at both eye with ptosis and VODS 6/6 with correction. Pupils size were midriated in both eye. Anterior and posterior segment examinations were normal. Intraocular pressure was normal limit in both eyes. Other systemic examinations were normal. Investigation blood counts were leukocytosis. CT Scan brain (plain and contrast) were also normal. He received methylprednisolone intravenous with followed by oral steroid and antimigraine betahistine mesylate. Three months since the attack, he had improved completely ophtalmoplegia with mild ptosis and mydriasis persisten.

#### Discussion

Ophtalmoplegia with migriane is represent first attack recurrent painful optic neuropathy (RPON) in child. The underlying pathogenesis of RPON are ischemia, inflammation and demyelination. This case was caused by inflammation leading to demyelination ocular cranial nerve that be considered to exclude another caused.

#### Conclusion

Methylprednisolone iv and tapering off given good result for bilateral ophthalmoplegia with migraine in children.

#### Keyword

Ophthalmoplegia, migraine, children, methylprednisolone.

#### Category

E-Poster

#### Latest Update

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## Epos-NO-15

### PUPILLARY INVOLVEMENT OCULOMOTOR NERVE PALSY IN HERPES ZOSTER PATIENT : Coincidence or sequelae?

#### Abstract Title

PUPILLARY INVOLVEMENT OCULOMOTOR NERVE PALSY IN HERPES ZOSTER PATIENT : Coincidence or sequelae?

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#### Abstract Type

Case Report

#### Introduction

Herpes Zoster Ophthalmicus (HZO) occurs often in elderly with severe manifestations. Usually it affects fifth cranial nerve with its associated dermatome. One of the complications is ophthalmoplegia. We present a rare case of third nerve palsy in patient with previous history of HZO.

#### Case Illustration

A 54-year-old male presented with ptosis of the left eye since 1 month before admission. Patient had a history of HZO and being treated by previous hospital with good compliance. One week after HZO, the upper left eyelid started to droop accompanied by left-sided headache. At presentation, BCVA was 6/20 with noticeable complete ptosis. No HZO vesicles were visible. The pupils were anisocoria in bright light with good consensual reflex on fellow eye. The motility was limited and typical for complete third nerve palsy. Other examinations were within normal limits. Ancillary test showed high fibrinogen count and dyslipidemia with abnormality on brain MRI that showed chronic infarction on left thalamus and nucleus caudatus. Patient was treated with gabapentin and methylcobalamin orally, and also referred to Neurology and Internal Medicine Department. One month later, patient showed complete resolution during ophthalmological examination.

#### Discussion

This is a rare case third nerve palsy occurring coincidentally with HZO. It can be caused by variable possible mechanisms. In the case of complete third nerve palsy with pupillary involvement, thorough examinations should be performed to rule out urgent causes such as aneurysm and space occupying lesion.

#### Conclusion

This case is an excellent example of ophthalmoplegia occurring along HZO to warrant that other examinations must be conducted.

#### Keyword

Herpes zoster, herpes zoster ophthalmicus, ophthalmoplegia, oculomotor nerve palsy

#### Category

E-Poster

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## Epos-NO-16

### NEUROMYELITIS OPTIC SPECTRUM DISORDER: A CASE OF RECURRENT BILATERAL ATYPICAL OPTIC NEURITIS

#### Abstract Title

NEUROMYELITIS OPTIC SPECTRUM DISORDER: A CASE OF RECURRENT BILATERAL ATYPICAL OPTIC NEURITIS

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#### Abstract Type

Case Report

#### Introduction

Neuromyelitis optic spectrum disorder (NMOSD) is a rare autoimmune inflammatory central nervous system disease associated with pathogenic aquaporin-4 autoantibodies (AQP4-IgG). We describe NMOSD case presenting as recurrent bilateral atypical optic neuritis (ON).

#### Case Illustration

29-year-old male came with painful sudden vision loss in the right eye for 12 days after vomiting and hiccup episodes. His visual acuity was light perception with optic nerve edema. Other neurological manifestations were absent. He had the same complaints on both eyes 5 months prior and was diagnosed with bilateral atypical ON. His right vision recovered slightly to finger counting after pulse dose of methylprednisolone at that time. Laboratory, radiological, and cerebrospinal fluid evaluations at first attack ruled out infection, hematological, and neurological etiologies. He halted all treatment and AQP4-IgG test due to COVID-19 pandemic. In this second attack, his vision improved to hand movement after pulse dose intravenous methylprednisolone. AQP4-IgG examination was positive. He was planned for immunosuppressant treatment to prevent relapse.

#### Discussion

Risk of recurrent attacks in NMOSD leading to severe disability is great. Untreated, half would be disabled, blind, and one-third would die within 5 years after first attack. Early diagnosis and prompt treatment with immunosuppressive agent are essential to prevent them. Red flags in ON cases include counting fingers visual acuity or worse, bilateral simultaneous disease, painful severe visual loss with poor recovery, and recurrence.

#### Conclusion

Screening for AQP4-IgG in ON patients with observed red flags, even in cases without other neurological manifestation, is required to established early diagnosis, and prevent further severe disability.

#### Keyword

Neuromyelitis optic, atypical optic neuritis, aquaporin-4 antibodies

#### Category

E-Poster

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## Epos-NO-17

### Steroid Management in Bilateral Idiopathic Optic Neuritis : Is it appropriate?

#### Abstract Title

Steroid Management in Bilateral Idiopathic Optic Neuritis : Is it appropriate?

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#### Abstract Type

Case Report

#### Introduction

Idiopathic optic neuritis is inflammation of optic nerve who doesn't reach the multiple sclerosis, neuromyelitis optica or atypical optic neuritis diagnostic criteria. The treatment of idiopathic optic neuritis is still debated where long-term oral steroid administration reported has a high recurrence effect. Recurrence usually occur after 5-10 year follow up.

#### Case Illustration

Women twenty years old, come with complain sudden blurry vision on both eyes since one week ago before admitted to hospital. Patient also complain fever for three days and pain when moving the eyes. Visual acuity on both eyes are no light perception. Fundus examination was found optic disc swelling on both eyes. Laboratorium result are normal. MRI results enhancement of medial optic nerve refer to bilateral optic neuritis. VEP result found lesions in the right and left optic nerves. Patient was diagnosed with RLE Optic disc swelling et causa optic neuritis. Patient received 250 mg of Methyl prednisolone IV therapy every 6 hours for 3 days and continued with oral prednisone 70 mg which is tapering off every week. After 1 month follow up, visual acuity getting improve 1.00 on both eyes. After 5 month follow up visual acuity still 1.00 on both eyes and no recurrences. Contrast sensitivity and color perception are normal on follow up.

#### Discussion

Administration of high dose steroid can improve visual acuity in this case. Patient still under observation to see the presence of recurrences.

#### Conclusion

Steroid administration still the best choice for treating idiopathic optic neuritis. Need long-term follow up to see present of recurrences.

#### Keyword

idiopathic, optic neuritis, steroid

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-NO-18

### Bilateral Congruous Homonymous Hemianopia with Macular Sparing and Multiple Higher Cortical Visual Function Disorders Associated Occipital Lobe Stroke

#### Abstract Title

Bilateral Congruous Homonymous Hemianopia with Macular Sparing and Multiple Higher Cortical Visual Function Disorders Associated Occipital Lobe Stroke

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#### Co Author

Lukisiari Agustini ()

#### Abstract Type

Case Report

#### Introduction

Homonymous hemianopia (HH) with macular sparing is defined as a homonymous visual field defect sparing the central visual field on the affected side that related with cortex disturbance<sup>1</sup>. Higher cortical visual disturbances should be suspected when patients have a damage in visual cortex<sup>2</sup>

#### Case Illustration

A 67-year-old man with history of ischemic stroke presented with a complaint of narrowing field of view gradually without by vision loss. Patient couldn't see two halves right of the objects, often stumbling or knocking with objects and difficulties in reading. From anterior and posterior examination of globes shows no abnormality. Several tests related occipital brain function found patient difficult in recognize familiar faces (prosopagnosia), unable to recognize several number in ishihara (cerebral achromatopsia) and difficult in reading but not in writing (alexia without agraphia).

#### Discussion

Macular sparing is visual field loss that preserves vision in the center of the visual field, it often appears in people with damage to one hemisphere of their visual cortex<sup>3</sup>. Higher cortical visual (or association) areas perform the more complex interpretation of visual information. Deficits caused by damage to these areas are characterized by abnormalities in visual processing or attention<sup>4</sup>

#### Conclusion

A complete examinations should be performed by clinician in every patient with occipital lobe stroke, not only the defect of visual field but also another associated symptoms in order to establish the comprehensive diagnostic and managements

#### Keyword

Homonymous hemianopia, Macular Sparing, Cortical

#### Category

E-Poster

#### Latest Update

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## Epos-NO-19

### AN ACTIVE, SIGHT-THREATENING GRAVES' ORBITOPATHY: A CHALLENGING CASE REPORT

#### Abstract Title

AN ACTIVE, SIGHT-THREATENING GRAVES' ORBITOPATHY: A CHALLENGING CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Graves' Orbitopathy is a self-limiting autoimmune process associated with dysthyroid states, and if left untreated can lead to a number of complications, ranging from mild to sight-threatening. Corneal ulcer is one of the sight-threatening complications of Graves' Orbitopathy

#### Case Illustration

A 22-year-old woman came with a complaint of blurred vision and retrobulbar pain on both eyes that happened gradually for 2 months, preceded by protrusion on both eyes. She had history of untreated hyperthyroid disease for 7 years. Her visual acuity was 1/60 and hand movement on the right and left eye, respectively. Anterior segment examination on both eyes revealed eyelids redness and swelling, redness and chemosis of conjunctiva, and corneal ulcer with descemetocoele on her right eye. All of these clinical findings support the diagnosis of an active, sight-threatening Graves' Orbitopathy.

#### Discussion

The management of this patient involves: 1) thyroid function control due to the high level of thyroid function, 2) active, sight-threatening Graves' orbitopathy management using high doses of intravenous methylprednisolon as guided by the 2016 European Group on Graves' Orbitopathy (EUGOGO) guidelines protocol, 3) Application of amniotic membrane transplant to prevent the prolapse of intraocular tissue.

#### Conclusion

By following EUGOGO guideline protocol, the clinical condition of this patient improved, but the management of an active, sight-threatening Graves' Orbitopathy remains challenging and should be covered by multidisciplinary approach.

#### Keyword

Graves' orbitopathy, hyperthyroid, corneal ulcer

#### Category

E-Poster

#### Latest Update

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## Epos-NO-20

### CONGRUOUS BILATERAL HOMONYMOUS HEMIANOPIA IN PATIENT WITH CEREBRAL SMALL VESSEL DISEASE: A CASE REPORT

#### Abstract Title

CONGRUOUS BILATERAL HOMONYMOUS HEMIANOPIA IN PATIENT WITH CEREBRAL SMALL VESSEL DISEASE: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Homonymous hemianopia is a visual field defect involving two halves of the visual fields of both eyes, caused by lesions of the retrochiasmal visual pathways, most commonly caused by stroke. Cerebral small vessel disease is the cause of about a quarter of all acute ischaemic strokes, with some various features associated with a higher incidence of ischaemic and haemorrhagic stroke.

#### Case Illustration

A 48-year-old man came with a gradual vision loss on both eyes and trouble seeing objects only on the half part of both his eyes. He had history of uncontrolled hypertension, presenting blood pressure of 192/112 mmHg. Patient had visual acuity of 6/12 on his right eye become 6/6 with S-1.00 correction, and 6/6 on the left eye. Fundus examination showed papilledema on both eyes. HFA examination presented homonymous hemianopia visual field defect, and brain MRI presented lesions on right centrum semiovale and right and left corona radiata, showing a small vessel ischemic disease.

#### Discussion

This patient suffered from this type of visual field defect yet most of his neurological testing revealed normal function. With a history of hypertension, and cerebral small vessel ischemic shown on his MRI, this patient had a higher risk of developing an ischemic stroke if no treatment of his underlying disease is managed.

#### Conclusion

This case showed a visual field defect appearance before any ischemic stroke happen. The management of this condition was to control the underlying disease, so no other complications might occur.

#### Keyword

Homonymous hemianopsia, cerebral small vessel disease, hypertension

#### Category

E-Poster

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## Epos-NO-21

### Congenital Marcus-Gunn Jaw-winking Syndrome

#### Abstract Title

Congenital Marcus-Gunn Jaw-winking Syndrome

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#### Abstract Type

Case Report

#### Introduction

Marcus-Gunn Jaw-winking Syndrome (MGJW) is a rare condition and very few cases have been reported on literature. This condition may be caused by congenital or acquired, which characterized by upper eye lid elevation while opening or moving the jaw.

#### Case Illustration

A 5-year-old male was complained by his mother about wider opening of the left upper eyelid while he open his mouth since born. Other visual problems were denied. His mother had the same symptom when she was child. Ophthalmology examinations found orthophoria with visual acuity was 0.9 (best corrected visual acuity was 1,0) on both eyes. The left upper eyelid position was lower than right eye (Marginal Reflex Distance, MRD +4 and +3). Both eyes had positive Bell's phenomenon. Anterior and posterior segment were normal. The eye movement was good in all direction. The patient was given vitamin B supplementation and spectacles correction.

#### Discussion

Surgery was performed on patient with ocular misalignment and moderate-severe ptosis that affecting visual function. Mild ptosis without ocular misalignment, frequently, resolve over the time. Observation should be done routinely to evaluate any symptoms that possible happened in the future.

#### Conclusion

Surgery treatment to Marcus Gunn usually in relation to ptosis and ocular misalignment that disturb patient daily living. Observation and supportive treatment was best choices for this patient at this moment.

#### Keyword

Congenital Marcus Gunn syndrome, ptosis, strabismus

#### Category

E-Poster

#### Latest Update

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## Epos-NO-22

### RELAPSE IN ATYPICAL OPTIC NEURITIS IN CHILDREN: HOW TO MANAGE

#### Abstract Title

RELAPSE IN ATYPICAL OPTIC NEURITIS IN CHILDREN: HOW TO MANAGE

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#### Abstract Type

Case Report

#### Introduction

Optic neuritis treatment needs patient compliance to complete the treatment. Relapse can occur on reducing the dose

#### Case Illustration

An 8-year-old boy with no history of trauma admitted with sudden blurred vision. Visual acuity was OD 1/60 and OS 3/60 with bilateral optic disc edema. Head CT scan showed bilateral optic nerve caliber thickening. High dose Intravenous corticosteroid administered for 3 days continued with oral corticosteroids. After one month the child came with declining of vision. Oral corticosteroid was stopped by his mother due to improvement of vision and VA was OD 1/300 and OS 0.67 and optic disc edema on the right eye. Immuno-serological test showed reactivity for Anti Rubella IgG and Anti CMV IgG. High dose intravenous corticosteroid for 3 days continued with oral corticosteroids then repeated. After treatment, the VA improved to 0.67 and 1.00 on the right and left eye respectively

#### Discussion

There is no evidence-based data for optic neuritis treatment for pediatric population. If a relapse occurs on reducing the dose, high-dose treatment is recommended and a corticosteroid sparing agent such as azathioprine started before reducing the dose again. Recovery of vision in childhood optic neuritis have a good prognosis

#### Conclusion

High dose IV steroid continued with oral steroids with a longer tapering period are recommended therapy in pediatric optic neuritis. If a relapse occurs intravenous steroid doses are repeated and continued with oral corticosteroid. A good patient education and compliance needed to avoid relapse

#### Keyword

Atypical pediatric optic neuritis, relapse, patient compliance

#### Category

E-Poster

#### Latest Update

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## Epos-NO-23

### Transient Visual Loss In Eclampsia

#### Abstract Title

Transient Visual Loss In Eclampsia

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#### Abstract Type

Case Report

#### Introduction

Preeclampsia and eclampsia are major causes of maternal and perinatal morbidity and mortality. Uncommon effects of eclampsia on the eye is visual loss. This blindness can be due to involvement of the occipital cortex or the retina. Although very alarming, this type of blindness is usually reversible following appropriate management of such patients.

#### Case Illustration

32-years-old primigravida at 34th weeks of gestation developed complete blindness and drowsiness after convulsion. Her BP was 190/100 mmHg. General and obstetric examination was normal. Visual acuity was absent. Urine showed 3+ proteinuria but all other investigations were normal. She was diagnosed with Eclampsia and started on MgSO<sub>4</sub>, antihypertensive drug and planned for CS. Detailed ophthalmic examination was presented after CS at ICU, the findings included pupillary reaction and fundoscopy were normal. MgSO<sub>4</sub> was continued for 24 hour. Her vision recover on the third day. BP became normal on fourth day. She was discharged after 1 week. Neuroimaging was not available.

#### Discussion

Eclampsia can effect visual pathways. Blurring and photopsia are common in eclampsia, but blindness is rare. The conditions which lead to visual loss in eclampsia include cortical blindness, retinal detachment, retinal vascular thrombosis and optic nerve atrophy. The management is treatment of eclampsia along with termination of pregnancy. The prognosis is usually good and vision loss is transient.

#### Conclusion

Visual loss in eclampsia is rare. Complete general, obstetric, and ophthalmic examination is required. The management is treatment of eclampsia along with termination of pregnancy.

#### Keyword

Eclampsia, Preeclampsia, Visual Loss, Cortical blindness, Retinal detachment

#### Category

E-Poster

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## Epos-NO-24

### CHARACTERISTICS OF HEMIANOPIA PATIENTS IN DR MOHAMMAD HOESIN HOSPITAL FROM JANUARY 2019 JUNE 2020

#### Abstract Title

CHARACTERISTICS OF HEMIANOPIA PATIENTS IN DR MOHAMMAD HOESIN HOSPITAL FROM JANUARY 2019 JUNE 2020

#### First Author

Nailul Authoriyah

#### Author Institution

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Hemianopia is a visual defects that occupy about one-half of an eye's visual space. It commonly complicates stroke, head injury and brain tumour. Hemianopia prevalence estimated of 0.8% in patients over 50 years of age. Signs and symptoms, as well as visual field characteristics can help determine the location of the causative brain lesion. This study describes the hemianopia characteristics found in patients who visited Mohammad Hoesin Hospital from January 2019 until June 2020.

#### Case Illustration

Only patients with complain of hemianopsia who had detail clinical information, neuroimaging results and or pathology anatomy examination were included in this study. Demographic characteristics, clinical features, type of visual field defects, and location of lesion were recorded. There were 11 patients with chief complain hemianopia and confirmed with HFA.

#### Discussion

From 11 patients with hemianopia (6 men and 5 women, mean age 49,5 (SD 9,8) years), 6 patients had homonymous hemianopia, 3 patients had bitemporal hemianopia, 1 patient had homonymous hemianopia with macular sparing, and 1 patient had quadranopia. All patients with bitemporal hemianopia had hypophysis adenoma, patient with homonymous hemianopia had diverse etiology such as stroke, traumatic brain injury, meningioma, and aneurysm. The median time from onset to initial visual field testing was 32 (3-96) weeks.

#### Conclusion

Most hemianopia patients caused of brain tumour, stroke had an older age and more often male. Patients with brain injury and aneurysm were at younger age. This study emphasise the important of knowledge about the visual pathway, epidemiology, and early evaluation of all patients with hemianopia.

#### Keyword

Hemianopia, visual field defect, homonymous hemianopia, bitemporal hemianopia, ischemic stroke

#### Category

E-Poster

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## Epos-NO-25

### HOMONYMOUS HEMIANOPIA AS SIGN IN PATIENT WITH LONG DISSECTING

FUSIFORM ANEURYSM: A CASE REPORT  
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PERDAMI Virtual Scientific Meeting, 2020

#### ABSTRACT

##### **Introduction**

Homonymous hemianopia (HH) is a visual field defect involving half of the visual field of both eyes due to any lesion involving the retrochiasmal visual pathway.

##### **Case Illustration**

A 36-year-old man was admitted to hospital due to sudden blurred vision on the right side of both eyes, worsening over the past 4 months. He also experienced a mild pulsating headache on his left back head since 4 years ago which intensified with activities and relieved by resting. There was a congenital skin and vessel anomaly on his left face. His visual acuity was 6/6 ODS. The anterior posterior segment and cranial nerves examination was normal. The visual field examination showed right homonymous hemianopia. The CT scan revealed lobulated lesion with post contrast enhancement in left suprasellar region near left posterior communicating artery. MRI, MRA, and DSA revealed a long dissecting fusiform aneurysm.

##### **Discussion**

Dissecting aneurysm is an aneurysm that occurs due to the separation of the layers in the artery wall which will initiate a gap that becomes the entry point for blood flow and eventually form a balloon-like structure that is vulnerable to ruptures. Homonymous hemianopia is the only sign of unruptured posterior cerebral artery aneurysm due to its compression of the visual pathways.

##### **Conclusion**

Homonymous hemianopia is an early sign of aneurysm that often missed by ophthalmologist attention. By being aware of the visual field defect we can reduce and prevent the morbidity and mortality of intra cranial aneurysms.

Key words: Homonymous hemianopia, long dissecting fusiform aneurysm

## Epos-NO-26

### Implementation of Blended Learning for Neuro-Ophthalmology Residency Training during Pandemic Covid-19

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#### **Introduction**

Blended learning is the suitable solution for eye resident learning in the new normal era of the Covid-19 pandemic.

#### **OBJECTIVE**

Implementation of blended learning for Ophthalmology residents in the new normal Covid-19 pandemic era

#### **METHODS**

Implementation of blended learning at Neuro-ophthalmology stage residents (n=5) at FKMK UGM, with off-line learning outpatient clinic, operating theatre, and wards. Online learning for

*lecture zoom meetings, online question practice, and inpatient Discussions.*

#### **RESULT**

Blended learning for Neuro-Ophthalmology residents can provide great benefits in the new normal Covid-19 era. It turns out that the implementation of online learning requires intensive supervision to ensure active participation of residents.

#### **CONCLUSION**

The implementation of blended learning is a good solution for resident learning in the new normal Covid-19 era, however intensive supervision were needed.

#### **KEYWORDS**

Blended learning, neuro-ophthalmology, new normal era Covid-19

## Epos-NO-27

### Rituximab as a Monoclonal Antibody: The Future Promising Alternative Strategy for Active Moderate to Severe Grave's Orbitopathy

#### Abstract Title

Rituximab as a Monoclonal Antibody: The Future Promising Alternative Strategy for Active Moderate to Severe Grave's Orbitopathy

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#### Abstract Type

Research

#### Introduction & Objective

Grave's orbitopathy (GO) is an autoimmune disorder occurred as an eye-related complication of thyroid gland dysfunction. High-dose steroids and surgical orbital decompression are required for GO with optic neuropathy or severe proptosis. However, responses are sometimes inadequate, hence, alternative treatment options are needed. Rituximab injection has been associated with very encouraging responses in active moderate to severe GO. This study aimed to determine the effectiveness of rituximab in treating patients with active moderate to severe GO.

#### Method

A systematic literature review was done by searching the electronic databases from five recent years (2014 to 2019) through MEDLINE, PubMed, Cochrane Library, ScienceDirect, and Google Scholar. Studies in English with human participants were included. The outcome of minimal 20 weeks follow-up was described by the patients' Clinical Activity Score (CAS).

#### Result

We included 77 patients in the studies consisting of prospective, randomized trial studies of active moderate to severe GO treated by rituximab. Despite no additional benefit stated in one study, the other studies indicated that CAS was statistically improved after administration of rituximab (p

#### Conclusion

Rituximab can be used as an alternative therapy in patients with moderate to severe GO who have to stop using steroids because of side effects or steroid-resistant, or relapse after receiving steroids. Steroids are still the mainstay of therapy but an additional rituximab in an early phase may be a safer and more effective therapy for active moderate to severe GO.

#### Keyword

Grave's orbitopathy, rituximab, clinical activity score

#### Category

E-Poster

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## Epos-NO-28

### FACTORS AFFECTING GENERALIZATION OF OCULAR MYASTHENIA GRAVIS IN MOHAMMAD HOESIN GENERAL HOSPITAL

#### Abstract Title

FACTORS AFFECTING GENERALIZATION OF OCULAR MYASTHENIA GRAVIS IN MOHAMMAD HOESIN GENERAL HOSPITAL

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#### Abstract Type

Research

#### Introduction & Objective

Introduction: Ocular Myasthenia Gravis (OMG) is an autoimmune disease which is characterized by fatigable weakness of extraocular muscles, levator palpebrae and orbicularis oculi, resulting in fatigable ptosis and binocular diplopia. Nearly all patients present with eyelid and extra ocular muscles involvement. Approximately 30% to 80% of patients with OMG experience a conversion to Generalized Myasthenia Gravis (GMG) within 2 years. There are not only have ptosis and diplopia but also limb weakness, bulbar symptoms, or even respiratory failure. Objective: To observe the clinical features of OMG to GMG and risk-factors and median time to conversion of OMG to GMG of myasthenia gravis patients in Mohammad Hoesin General Hospital Palembang.

#### Method

Cohort Retrospective

#### Result

A total of 91 OMG patients were observed in this study with 32 (35,2%) patients converted from Ocular Myasthenia Gravis to General Myasthenia Gravis. Median conversion time to GMG was 34 months. Risk factor for conversion cases of OMG to MGG was receiving immunosuppressive agents (Risk: 14.7, 95% CI 4.83, 44.7), Tymus Hyperplasia (Risk: 3.36, CI 95% 0.33, 33.6), Female (Risk: 2.41, 95% CI 0.94, 6.17), Smoking (Risk: 1.56, 95% CI 0.31, 7.81).

#### Conclusion

Ptosis was the devinitife sign for OMG in this study, with all patients had ptosis, thus it needs the collaboration from Neuroophthamologist and neurologist to diagnose and manage this case. Most of converted case was female and those who receive an immunosuppressive agent therap

#### Keyword

Ocular myasthenia gravis, generalized myasthenia gravis, conversion

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-IIM-01

### BILATERAL PERIORBITAL NECROTIZING FASCIITIS IN DIABETIC MALE PATIENT: A CASE REPORT

#### Abstract Title

BILATERAL PERIORBITAL NECROTIZING FASCIITIS IN DIABETIC MALE PATIENT: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Periorbital necrotizing fasciitis is a rare, life and sight threatening, severe bacterial infection involving subcutaneous soft tissue, predominantly at superficial and deep fascia in periorbital region. Periorbital necrotizing fasciitis often develops in immunocompromised patients following injury and superficial infection

#### Case Illustration

A 61-year-old male came with very painful swelling of both eyelids and skin ulcer on the right eyelid accompanied by fever 7 days earlier, that was initiated by right temporal excoriated wound 2 weeks earlier. He also had uncontrolled diabetes mellitus for 10 years. Visual acuity of both eyes were light perception with projection. Examination revealed swelling and redness of both eyelids, frontal, and right maxillary regions; ulceration and necrotic tissue on the right eyelid and right temporal region; fluid filled blebs and purulent discharge were also seen on both eyes. Orbital CT scan showed swelling of soft tissue on the frontal, palpebral, nasal, and right maxillary regions. Klebsiella pneumoniae and extended spectrum beta lactamases were isolated from orbital swab. We treated this patient using antibiotics and surgical debridement. Our treatment was successful in controlling infection

#### Discussion

This immunocompromised patient had minor trauma which became port d'entrée of infection then spread into fascia. The pathogen was confirmed to be Klebsiella pneumoniae and extended spectrum beta lactamases. Prompt antibiotics and surgical debridement resulted in satisfying wound healing

#### Conclusion

Rapid diagnosis and treatment are essentials to reduce the morbidity and mortality of necrotizing fasciitis

#### Keyword

necrotizing, fasciitis, debridement

#### Category

E-Poster

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#### Status

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## Epos-IIM-02

### AMNION MEMBRANE TRANSPLANTATION ON CORNEAL ULCER: A CASE REPORT

#### Abstract Title

AMNION MEMBRANE TRANSPLANTATION ON CORNEAL ULCER: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Amniotic membrane (AM) has antibacterial, antiangiogenic, anti-inflammatory and antifibroblastic properties. These characteristics may play a role in the use of AMT in the treatment of infectious keratitis.

#### Case Illustration

A 64 years old man presented with red, pain, fotofobia and blurred vision in the ocular sinistra (OS). History of foreign body on the OS surface (+). History of using plant based traditional medicine as a topical eye drops (+). On examination of OS: VA was LP (+), NCT was 26 mmHg, ulcer (+) 2/3 stroma, hypopion  $\pm$  3 mm, fluorescein staining (+): 5x5 mm. This patient was clinically diagnosed with keratitis ulcer OS suspect fungal infection. Patient got oral and topical eye drops therapy but there was no improvement so the patient was planned for amniotic membrane transplantation OS.

#### Discussion

AM has three main aims in clinical use such as to promote epithelialization, reduce pain and minimize inflammation of the ocular surface. AM produces basic fibroblast, hepatocyte and TGF which stimulate epithelialization and modulate proliferation and differentiation of stromal fibroblasts. There are three technique in AMT: (1) inlay or graft technique, (2) onlay or patch technique, (3) inlay and onlay technique.

#### Conclusion

Amniotic membrane transplantation is used to treat chronic diseases of the surface of the eye and as a biomatrix to treat severe stem cell deficiency of the ocular surface. AMT when used as adjunct to antibiotic/antifungal therapy has a beneficial effect on the healing process of corneas infected by bacterial/fungal keratitis.

#### Keyword

Amniotic, Corneal, Ulcer

#### Category

E-Poster

#### Latest Update

July 20, 2020

#### Status

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### Epos-IIM-03

## SUBCONJUNCTIVAL ANTIBIOTIC TREATMENT FOR PSEUDOMONAS INFECTIOUS SCLERITIS

#### Abstract Title

SUBCONJUNCTIVAL ANTIBIOTIC TREATMENT FOR PSEUDOMONAS INFECTIOUS SCLERITIS

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#### Abstract Type

Case Report

#### Introduction

*Pseudomonas aeruginosa* is a Gram-negative pathogen in cases of severe purulent corneal ulcers that can cause scleritis and can lead to permanent vision loss.

#### Case Illustration

A 55-year-old male complaint decreased vision, redness, and pain on his right eye for 3 weeks after injury with plant material and had diabetes mellitus (DM). His visual acuity was light perception in the right eye and 6/12 in the left eye. Slit lamp examination of the right eye revealed diffuse congestion of the globe, corneal ulcer, hypopyon, and yellowish white nodule on the temporal side of the sclera. His intraocular pressure (IOP) and ultrasonography were normal. While he controlled his blood sugar, topical levofloxacin and natamycin with oral ciprofloxacin had given. After 14 days follow up, he developed multiple nodules on the superior side of the sclera, and the scleral scraped tissue identified *P. aeruginosa*. He then had surgical debridement and subconjunctival gentamycin injection. After 21 days follow up, the scleral lesion resolved.

#### Discussion

*Pseudomonas scleritis* is the most common form in developed countries, accounting for about 85% of all bacterial scleritis cases and often presents with multiple nodules. DM help altered ocular surface microbiota. Studies showed that A variety of non-surgical strategies are used. However, medical therapy alone is effective only in 18% of cases.

#### Conclusion

*P. aeruginosa* can cause infectious scleritis complicated. Surgical debridement with subconjunctival antibiotics is an effective treatment.

#### Keyword

Infectious Scleritis, *Pseudomonas*

#### Category

E-Poster

#### Latest Update

July 23, 2020

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### Epos-IIM-04

## TRIMETHOPRIM-SULFAMETHOXAZOLE IN THE TREATMENT OF ACTIVE TOXOPLASMA RETINOCHOROIDITIS: A CASE REPORT

#### Abstract Title

TRIMETHOPRIM-SULFAMETHOXAZOLE IN THE TREATMENT OF ACTIVE TOXOPLASMA RETINOCHOROIDITIS: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Ocular toxoplasmosis represents the most common cause of infectious retinochoroiditis in many countries, approximately 25-30% of population worldwide. It is a potentially blinding, progressive, recurring, and non-curable disease caused by *Toxoplasma gondii*. Infection may be congenital or acquired through ingestion of uncooked meat, contaminated vegetables or water.

#### Case Illustration

A 58-year-old female came with complaints of blurred vision and floaters in left eye for a month. She had contacted with cats, birds, and dogs, as well as eaten raw food before. On examination, anterior segments were normal with visual acuity of 6/6 in the right eye and 6/9 in the left eye. Fundus examination revealed vitreous haze with yellow-white exudate located between papil and macula. The SD-OCT showed disorganized retinal structure and thickened choroid under the active lesion. Highly elevated serum titers of IgG antibodies against *Toxoplasma gondii* were observed.

#### Discussion

As a potentially blinding disease, ocular toxoplasmosis must be recognized clinically and treatment should be started as early as possible especially in the active period. Our patient was treated with oral trimethoprim (160 mg)/sulfamethoxazole (800 mg) twice daily and topical eye drops of prednisone four times daily on the left eye. These drugs were prescribed instead of sulfadiazine/pyrimethamine which is the classical and standard therapy. After 4 weeks, fundus examination showed toxoplasmic lesion was significantly decreased in size and vitreous haze was improved.

#### Conclusion

On top of the classic treatment for ocular toxoplasmosis, Trimethoprim-Sulfamethoxazole regiments as the alternative option for active ocular toxoplasmosis also shows significant improvement with less adverse effect.

#### Keyword

toxoplasmosis, trimethoprim, sulfamethoxazole

#### Category

E-Poster

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July 26, 2020

#### Status

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## Epos-IIM-05

### MANAGEMENT OF BILATERAL PERIPHERAL ULCERATIVE KERATITIS

#### Abstract Title

MANAGEMENT OF BILATERAL PERIPHERAL ULCERATIVE KERATITIS

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#### Abstract Type

Case Report

#### Introduction

Peripheral Ulcerative Keratitis (PUK) is type of inflammatory disease that occurs in the limbal region of the cornea and causing peripheral corneal thinning. Clinical manifestations of PUK is crescent-shaped destructive lesion which characterized by stromal degradation and inflammatory cells with an overlying epithelial defect. The main goal of therapies in PUK is to achieve control of the inflammatory process with minimal damaging consequences.

#### Case Illustration

A 42-year-old male presented in Infection and Immunology unit complaining blurred-red eye on the right eye for the past 1 year and the fellow eye similarly blurred starting 2 months ago. A slit lamp examination of the right eye showed crescent-shaped lesion with thinning and neovascularization on nasal portion of the cornea, while there was crescent-shaped lesion with prolapsed iris and neovascularization on the nasal portion of the left eye. Rheumatoid factor test shown reactive result. Patient diagnosed with bilateral PUK was treated with topical and systemic corticosteroid, immunomodulator, and also referred to Rheumatology Unit and followed by corneoscleral (banana) patch graft surgery on the left eye.

#### Discussion

Peripheral Ulcerative Keratitis is caused by autoimmune or infectious disease, furthermore can be either unilateral or bilateral. Important to differentiate the cause of PUK as it relates to treatment will be given. Bilateral PUK is a rare condition and requires proper diagnostic and therapeutic approach, so that the inflammatory process does not get worse.

#### Conclusion

Proper recognition, careful monitoring, and adequate treatment are important for patient with PUK. Corneoscleral patch graft surgery can be performed in corneal perforation in PUK patient.

#### Keyword

Peripheral Ulcerative Keratitis, autoimmune disease, treatment

#### Category

E-Poster

#### Latest Update

August 05, 2020

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## Epos-IIM-06

### OCULAR TUBERCULOSIS: A DIAGNOSTIC CHALLENGE

#### Abstract Title

OCULAR TUBERCULOSIS: A DIAGNOSTIC CHALLENGE

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#### Abstract Type

Case Report

#### Introduction

Tuberculosis (TB) is an infectious disease that mostly affects the lungs. However, TB can affect any tissue in eye and mimics other diseases. Here, we report a case of ocular manifestation in systemic tuberculosis patient.

#### Case Illustration

A 25-year-old man with known history of miliary tuberculosis, presented to Infection and Immunology unit with chief complaint of redness on the left eye. He also noted blurred vision, approximately three months before presentation. The patient was referred from another eye hospital, diagnosed with panuveitis in the left eye. The visual acuity was light perception and anterior segment evaluation revealed ciliary injections, scleral thinning with visible choroid bulging anteriorly, corneal edema and neovascularization. He was diagnosed with sclerouveitis tuberculosis of left eye and miliary tuberculosis on therapy. The patient was treated with oral anti-tuberculosis regimen, methylprednisolone, topical prednisolone acetate, cyclopentolate, artificial tears, oral acetazolamide and kalium aspartate. A month after that, the man came to follow-up visit, with worsen eyesight.

#### Discussion

Ocular TB occurs with or without systemic manifestation. It is caused by bacterial invasion or hypersensitivity reaction to circulating antigen. Similar with previous study, ocular TB manifested as scleromalacia and uveitis. Definitive diagnosis of ocular TB is based on pathological findings, and microbiological examination from intraocular fluid or scraping. In this case, ocular TB presumed by thorax X-ray that revealed miliary tuberculosis.

#### Conclusion

Tuberculosis can manifest as sclerouveitis. Accurate diagnosis is required to treat ocular tuberculosis.

#### Keyword

ocular tuberculosis, scleritis, uveitis

#### Category

E-Poster

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## Epos-IIM-07

### GONOCOCCAL KERATOCONJUNCTIVITIS IN ADULTS: "A LATE DIAGNOSIS"

#### Abstract Title

GONOCOCCAL KERATOCONJUNCTIVITIS IN ADULTS: "A LATE DIAGNOSIS"

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#### Abstract Type

Case Report

#### Introduction

Gonococcal keratoconjunctivitis is a rare case in adults and is caused by neisseria gonorrhoeae, a gram-negative bacterial diplococcus. The purpose of this case report is to increase knowledge about gonococcal keratoconjunctivitis in adults.

#### Case Illustration

A 47 years old male complained profuse purulent discharge from his right eye for 1 week. Right eye visual acuity was 1/300. From ophthalmology examination found palpebral edema, massive conjunctival purulent secrete, shallow anterior chamber, corneal infiltrate, and corneal edema. Gram stain of ocular discharge showed neisseria gonorrhoeae.

#### Discussion

Diagnosis was made based on complete history taking, ophthalmology and microbiology examination. Antibiotic, cycloplegic and antiglaucoma were administered to the patient. The complaints and microbiological test were improved after 3 days of therapy. Right eye visual acuity was improved to 4/60 after 6 weeks of outpatient follow-up.

#### Conclusion

Gonococcal urethritis must be ruled out from every adult patient presenting purulent conjunctivitis. Conjunctival secrete examination and immediate treatment are important to prevent sight-threatening complication.

#### Keyword

Gonococcal keratoconjunctivitis, neisseria gonorrhoeae

#### Category

E-Poster

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## Epos-IIM-08

### HERPES ZOSTER OPHTHALMICUS: A CASE REPORT AND REVIEW OF CURRENT ANTIVIRAL MANAGEMENT

#### Abstract Title

HERPES ZOSTER OPHTHALMICUS: A CASE REPORT AND REVIEW OF CURRENT ANTIVIRAL MANAGEMENT

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#### Abstract Type

Case Report

#### Introduction

Herpes zoster ophthalmicus (HZO) is a viral infection caused by the reactivation of the latent varicella zoster virus, manifesting in the impairment of the ophthalmic division of trigeminal nerve. This case illustrates the classic manifestation of HZO and discusses appropriate and current management approach.

#### Case Illustration

A 80-year-old male presented with a painful erythematous-vesiculopapular rash on his right forehead. His right eye was increasingly watery, red, and swollen as he was unable to open his eye. Ophthalmologic exam revealed a significant blepharospasm and conjunctival irritation with mucopurulent exudates. Visual acuity was 6/60 in the right eye. Anterior chamber slit lamp examination showed no corneal infiltration, ulceration, or cell and flare. Fluorescein staining was unremarkable. The remainder of ocular and other systems examinations were within normal limit. He was later administered on oral valacyclovir, oral pain reliever, topical antibiotic eyedrop, and topical artificial tears.

#### Discussion

Five randomized-controlled trials were reviewed, comparing three different oral antiviral regimens available in HZO management, namely acyclovir, valacyclovir, and famciclovir. The course of acyclovir in compare to placebo concluded that active treatment was more effective in reducing symptoms. Both valacyclovir and famciclovir were more effective to accelerate the resolution of the disease, provides more convenient dosing, and maintains more favorable safety profile in compare to acyclovir regimen.

#### Conclusion

Herpes zoster ophthalmicus is commonly affecting geriatric population. The administration of valacyclovir in this case was appropriate and furtherly more recommended as the treatment of choice in the management of HZO.

#### Keyword

Herpes zoster ophthalmicus, viral conjunctivitis, antiviral

#### Category

E-Poster

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August 07, 2020

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## Epos-IIM-09

### AMNIOTIC MEMBRANE TRANSPLANT THERAPY IN ACUTE OCULAR STEVEN-JOHNSON SYNDROME PATIENT

#### Abstract Title

AMNIOTIC MEMBRANE TRANSPLANT THERAPY IN ACUTE OCULAR STEVEN-JOHNSON SYNDROME PATIENT

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#### Abstract Type

Case Report

#### Introduction

Steven-Johnson Syndrome (SJS) is characterized by exfoliating of the skin and mucosal surfaces, including ocular surface. Amniotic membrane transplantation (AMT) has been used in treating ocular SJS though the exact mechanism by which it can benefit remains unknown. This report aims to showcase AMT as an effective therapy for the acute stage of ocular SJS.

#### Case Illustration

We report a 37 years old female with SJS after consuming allopurinol. The patient experienced pain and redness on both eyes, photophobia, and blurred vision. The initial ophthalmology examination revealed visual acuity of 1/300 OU, palpebral edema, blepharospasm, and corneal epithelial defect. Within 72 hours after the symptoms appeared, cryopreserved AMT was performed on both eyes. Four weeks after AMT, clinical signs and visual acuity were significantly improved. There were no scarring or other complications found.

#### Discussion

Amniotic membrane contributes to epithelization and acts as immunomodulatory and antimicrobial property. AMT has been used in treating ocular surface diseases including SJS, especially in patients with persistent corneal epithelial defect, eyelid margin involvement, pseudomembranes, and defect of tarsal conjunctiva/fornix. Early AMT reduces inflammation and prevents severe chronic sequelae, resulted in improved ocular outcomes. We performed AMT in the acute stage of SJS. Four weeks after AMT the patient was successfully relieved from pain and photophobia, inflammation was resolved, corneal epithelium was restored, with no scarring, symblepharon nor trichiasis. Visual acuity significantly improved.

#### Conclusion

AMT is an effective treatment in the acute phase of ocular SJS as it facilitates rapid epithelial healing and reduces inflammation and scarring of the ocular surface.

#### Keyword

amniotic membrane transplantation, Steven-Johnson syndrome, ocular surface

#### Category

E-Poster

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## Epos-IIM-10

### Preseptal Cellulitis & Orbital Cellulitis

#### Abstract Title

Preseptal Cellulitis & Orbital Cellulitis

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#### Abstract Type

Case Report

#### Introduction

Periorbital cellulitis, also known as preseptal cellulitis, is a skin and soft tissue infection around the eye anterior to orbital septum. Rarely lead to serious complications, but it can present similarly to a more serious condition, orbital cellulitis. Orbital cellulitis is infection of orbital tissues posterior to orbital septum. It is important to distinguish between preseptal and orbital cellulitis because treatment and management differ based on diagnosis.

#### Case Illustration

Three cases of preseptal cellulitis and three cases of orbital cellulitis were treated at Mohammad Hoesin Hospital Palembang (July 2016 to October 2019). Patients presented with eyelid swelling, erythema, limited extraocular motility, purulent discharge, pain and decreased vision. All patients were treated with warm compresses, antibiotics, symptomatic drugs, and systemic steroid for some. Five of six patients showed improvement clinically and one patient died of sepsis.

#### Discussion

Classical signs almost always seen in preseptal and orbital cellulitis, usually are unilateral. About 70–90% of cases originated from direct sinusitis spread. Sometimes clinical distinction between preseptal and orbital cellulitis is unclear. Inadequate preseptal cellulitis treatment can lead to orbital cellulitis, subperiosteal abscess, orbital abscess or cavernous sinus thrombosis. Mainstay treatment for preseptal and orbital cellulitis is antibiotic coverage against *S. Aureus*, *Streptococcus* species and anaerobes. Corticosteroid can be used to reduce sinus swelling, stenosis, edema, scarring, preventing orbital pressure elevation and orbital structures compression.

#### Conclusion

Preseptal and orbital cellulitis can be diagnosed and differentiated from history taking, physical and radiological examination. If treated appropriately, orbital cellulitis patient often have good outcome.

#### Keyword

Preseptal cellulitis, orbital cellulitis

#### Category

E-Poster

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## Epos-IIM-11

### THE MANAGEMENT OF PERIPHERAL ULCERATIVE KERATITIS

#### Abstract Title

THE MANAGEMENT OF PERIPHERAL ULCERATIVE KERATITIS

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#### Abstract Type

Case Report

#### Introduction

Peripheral Ulcerative Keratitis (PUK) is a form of unilateral crescent-shaped stromal inflammation, which involves the juxtalimbal cornea and is characterized by sectorial thinning of the affected area. PUK has potentially serious complications such as perforation of the cornea and might be prevented with timely diagnosis, detection of the underlying systemic inflammatory disease, and proper treatment.

#### Case Illustration

This was a 32-year-old male admitted for follow-up visit after underwent patch graft surgery on his right eye. He came first with history of got hit by a stone in his right eye. Patient has history of recurrent redness on his right eye, accompanied by pain and photophobia. He was diagnosed as post corneoscleral patch graft right eye due to PUK and treated with immunosuppressive agent.

#### Discussion

PUK is a corneal infection and inflammatory diseases which associated with an overlying epithelial defect and progressive loss of corneal stroma. The pathogenesis of PUK is associated with anatomical and immunological characteristics of peripheral cornea. Inflammatory process can be associated with life-threatening autoimmune collagen vascular diseases, and PUK might be the initial sign of this systemic disease. Management in PUK include controlling of the systemic inflammatory disease.

#### Conclusion

Initiation of appropriate immunosuppressive therapy with corticosteroids and cytotoxic agents are life-saving. Corneal patch graft can be done if corneal perforation has occurred.

#### Keyword

PUK, management, corneal patch graft.

#### Category

E-Poster

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## Epos-IIM-12

### INTERVENTION DURING ACUTE PHASE IN STEVENS-JOHNSON SYNDROME

#### Abstract Title

INTERVENTION DURING ACUTE PHASE IN STEVENS-JOHNSON SYNDROME

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#### Abstract Type

Case Report

#### Introduction

Stevens-Johnson syndrome (SJS) is an acute, presenting as severe mucosal erosions with widespread erythematous. All patient with SJS should be evaluated urgently by an ophthalmologist because the eye involvement can evolve quickly in the first few days of the illness. Intervention during the acute phase (7 – 10 days) are crucial, as the long-term sequel can be difficult to repair.

#### Case Illustration

A 42 years old women came with blurred vision on both eyes for 1 week ago. Patient had been diagnosed with Stevens-Johnson syndrome by dermatologist and showed epidermolysis with crust at body, palm, neck, and face. Her visual acuity was 3/60 for right eye and 2/60 for the left eye. The examination showed swelling with crust in both eyelids, siliar injection and corneal epithelium defect. Patient got crucial treatment in 7-10 days by administering topical antibiotic, artificial tears, and autologous serum. Three weeks post therapy the visual acuity showed improvement of 20/20 for the right eye and 20/30 for the left eye.

#### Discussion

Proper treatment in acute phase of SJS reduced the morbidity of the disease. The basic principle of management are to suppress the occurrence of severe inflammatory reactions, to maintain the structure and integrity of the ocular surface, and to prevent further complications by evaluating visual acuity, tear film stability, and palpebra margin deformity.

#### Conclusion

Management during acute phase in ophthalmic manifestation of SJS should be focus on the prevention of secondary complication in area of significant epithelial sloughing.

#### Keyword

Acute Ophthalmic manifestation, Steven Johnson Syndrome

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-13

### STROMAL CORNEAL LENTICULE PATCH GRAFT AS CORNEAL PERFORATION MANAGEMENT

#### Abstract Title

STROMAL CORNEAL LENTICULE PATCH GRAFT AS CORNEAL PERFORATION MANAGEMENT

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#### Abstract Type

Case Report

#### Introduction

Corneal perforation is an ophthalmological emergency that need to be treated immediately. There are many corneal perforation causes including gram-negative diplococcus keratoconjunctivitis. Many options to manage corneal perforation both medically or surgically. One of the surgical options for corneal perforation was lenticule patch graft.

#### Case Illustration

A-27-year old woman presented with chief complaint of massive discharge with redness and pain on both eyes. Ocular examination revealed VOD 0.125 and VOS 3/60, keratic precipitates superficialis on right eye, and corneal ulcer with prolapse iris on left eye. Eye secret examination showed gram negative bacteria coffee bean shaped on both eye. Patient then diagnosed with blepharokeratoconjunctivitis on right eye and corneal ulcer with epithelized iris prolapse caused by gram-negative cocci blepharokeratoconjunctivitis on left eye. Patient was treated by stromal corneal lenticule patch graft to prevent the progress of further corneal perforation on her left eye and given intravenous antibiotic with topical medicine. Patient has done routine follow up along 3 weeks after surgery with her visual acuity was VOD 0.32 and VOS 0.25.

#### Discussion

Corneal perforation caused by infection is mostly by bacterial. Neisseria gonorrhoeae can invade intact cornea and can cause corneal perforation within 24 hours after infection. Local therapy and systemic can given to treat the infection. Surgical therapy such as lenticule patch graft can be given to treat corneal perforation.

#### Conclusion

Lenticule patch graft can be used as a practical alternative for management corneal perforation.

#### Keyword

Corneal perforation, stromal corneal lenticule patch graft, gram-negative cocci conjunctivitis.

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-14

### Fortified Fluconazole Eyedrops for Treatment of Culvularia Corneal Ulcer

#### Abstract Title

Fortified Fluconazole Eyedrops for Treatment of Culvularia Corneal Ulcer

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#### Abstract Type

Case Report

#### Introduction

Fungal keratitis is less common than bacterial keratitis. In developing countries (Ghana, India, China) it accounts for more than 90% of the cases. Corneal trauma by plant or vegetative material is the leading risk factor for fungal keratitis. One or more topical antifungals are usually administered with systemic support of oral antifungals.

#### Case Illustration

A 47-year-old man presented with a white spot that seemed to be getting larger on the left eye since 4 days ago. The left eye was injured by wood flakes 3 weeks ago. He felt pain, redness, blurred vision, difficult to open eye, discharge and watery eye in the left eye. He washed his eye with betel leaf water. His left eye visual acuity was 1/60 and not improved with pinhole. Corneal examination showed a cloudy cornea, a central corneal defect sized 8x6 mm with irregular margin, 2/3 to stromal depth, infiltrate, satellite lesion, and positive fluorescein staining at the defect margin. KOH examination demonstrated hyphae. Culture test of left corneal discharge identified a fungi species (*Curvularia* sp). We prescribed fortified fluconazole eyedrops for 2.5 months. This regimen showed significant increase in visual acuity to 6/30.

#### Discussion

Imidazole acts by inhibiting ergosterol biosynthesis of the fungal cell wall, through action on the cytochrome P450-dependent enzyme. *Curvularia* sp belongs to the family of dematiaceous fungi. Fluconazole (2 mg/ml) is available for injection and is a well-tolerated eye drops.

#### Conclusion

Fortified fluconazole eyedrops (2 mg/ml) can become an alternative and additional therapy for deep fungal keratitis especially for *Curvularia* sp.

#### Keyword

Fortified Fluconazole, Fluconazole Eyedrops, *Curvularia* sp keratitis

#### Category

E-Poster

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## Epos-IIM-15

### BENZATHINE PENICILLIN G INTRAMUSCULAR SUCCESSFULL TREATMENT OF OCULAR SYPHILIS WITH HUMAN IMMUNODEFICIENCY VIRUS POSITIVE : A CASE REPORT

#### Abstract Title

BENZATHINE PENICILLIN G INTRAMUSCULAR SUCCESSFULL TREATMENT OF OCULAR SYPHILIS WITH HUMAN IMMUNODEFICIENCY VIRUS POSITIVE : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Ocular Syphilis is a manifestation of multisystemic chronic infection caused by the spirochete *Treponema pallidum*, which can affect all structures and may present as anterior uveitis, posterior uveitis, panuveitis, retinitis, papillitis, making it "a great masquerader".

#### Case Illustration

A 28 year old man (heterosexual) presented with painless blurred vision in last three months. His visual acuity was hand movement in his right eye and 1/60 in the left one with no dermatology lesion, funduscopy finding papillitis and vitreous cells in both eyes with retinal vasculitis and intraretinal hemorrhage in inferior region in left eye, serological tests revealed positive VDRL, TPHA and also ELISA test for human immunodeficiency virus. The patient immediately treated with benzathine penicillin G 2.4 million units intramuscularly once a week for three consecutive weeks and antiretroviral. After three months, his visual acuity improved to 20/30 in both eyes with decreased of papillitis and intraretinal hemorrhage and decreased VDRL titer.

#### Discussion

Ocular syphilis co-infection with HIV gives more rapid and extensive progression. CDC recommends all patients with ocular syphilis to be treated as neurosyphilis with intravenous benzyl penicillin as first line therapy because it can penetrate blood ocular barrier whereas penicillin G doesn't. The patient received treatment with benzathine penicillin G upon diagnosed and gave good response with comprehensive therapy.

#### Conclusion

Syphilis with HIV positive is curable with Benzathine Penicillin G Intramuscular, early detection and treatment are important for good visual outcome.

#### Keyword

ocular, syphilis, penicillin

#### Category

E-Poster

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## Epos-IIM-16

### A RARE OCULAR MANIFESTATION OF DENGUE: A CASE REPORT

#### Abstract Title

A RARE OCULAR MANIFESTATION OF DENGUE: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Dengue is the most common mosquito-borne viral disease of humans, especially in tropical countries such as Indonesia. Ocular manifestations of dengue fever are uncommon but one must be cautious about the severe manifestation with the risk of sight-threatening.

#### Case Illustration

A 26-year old female came to ER presented with bloody discharge from her left eye two days after itching and rubbing her eyes. The complaint was accompanied by proptosis with hematoma in the left eye. She had 4 days history of fever without other manifestation of bleeding. There was no history of trauma and comorbidities. On examination, visual acuity was light perception with presented severe chemosis, lid edema, subconjunctival hemorrhage, and total hyphema. B scan ultrasonography revealed a retrobulbar hemorrhage. The intraocular pressure (IOP) was increased and extraocular movements were reduced. Laboratory investigation showed normal results expect for thrombocytopenia. The patient was given antibiotic, antiglaucoma agent, steroid, and antifibrinolytic agent. The patient was referred to referral hospital. At the referral hospital, the patient reported a prolapse of her eye despite several previous medications.

#### Discussion

Ophthalmic manifestations are rare and varied. Interestingly, the manifestations occurred unilaterally without other complaints of bleeding. Eye manifestations that appear in cases of dengue fever are early indications to treat dengue fever vigorously to prevent blindness.

#### Conclusion

Dengue cases cannot be underestimated, the comprehensive examination on the eye should be performed if there are ocular manifestation to get a better prognosis.

#### Keyword

Dengue Fever, Ocular manifestation of dengue, Ocular emergencies

#### Category

E-Poster

#### Latest Update

August 14, 2020

#### Status

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## Epos-IIM-17

### Ocular Toxoplasmosis: A Rare Case Presentation of Bilateral Recurrent Atypical Ocular Toxoplasmosis

#### Abstract Title

Ocular Toxoplasmosis: A Rare Case Presentation of Bilateral Recurrent Atypical Ocular Toxoplasmosis

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#### Abstract Type

Case Report

#### Introduction

Toxoplasmosis infection in humans is often subclinical, presenting asymptomatic or with nonspecific symptoms, not determining any ocular involvement. Once the infection reaches the eye, it usually appears as chorioretinitis. Although chorioretinitis are usually highly characteristic, the lesion also can be found as choroiditis or known as atypical presentation.

#### Case Illustration

A 18-year-old woman presented with blurred vision in both eyes. The visual acuity of both eyes were 20/25. The Intraocular Pressure and the anterior segment were unremarkable. The dilated fundus showed an active lesion at the macula of the right eye and scar at the macula of the left eye. Optical Coherence Tomography obtained through the fovea reveals disorganized RPE with subretinal hyperreflective on both eyes and they also had a hypertrophic black choroidal scar at macula. Suggestive choroiditis in both eyes with scarring on the left eye. The lesion decreased progressively as she received cotrimoxazole, azithromycin, methylprednisolone.

#### Discussion

Choroiditis without retinitis were found in the right eye as well as choroidal scar in the left eye. This patient has suggestive atypical type of recurrent lesion marked by the presence of active lesion in the setting of old pigmented retinal scars in either eye as in this patient has shown. The therapeutic response was favorable in this case, with the improvement of the clinical manifestations.

#### Conclusion

OT does not always appear as chorioretinitis, it can also appear as choroiditis (atypical OT). The diagnosis of atypical OT is often presumptive and the differential diagnosis includes syphilis, herpes and other infections are needed.

#### Keyword

Atypical Ocular Toxoplasmosis, Choroiditis

#### Category

E-Poster

#### Latest Update

August 15, 2020

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## Epos-IIM-18

### EYE OINTMENT THERAPY IN BILATERAL CONGENITAL ECTROPION IN PATIENT WITH HARLEQUIN ICHTHYOSIS : A CASE REPORT

#### Abstract Title

EYE OINTMENT THERAPY IN BILATERAL CONGENITAL ECTROPION IN PATIENT WITH HARLEQUIN ICHTHYOSIS : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Harlequin ichthyosis (HI) is congenital disorder which is characterized by severe erythrodermic ichthyosis, epidermal desquamation, and ocular complications such as ectropion that characterized by abnormal eversion of the eyelids. Surgical interventions, frequent lubrication drops and eye ointments, antibiotics, frequent eyelids skin massage with lubrication can be preferences for treatment

#### Case Illustration

A 10-day-old boy was consulted from pediatrician with bilateral congenital ectropion and HI. When consulted, his weight was 1960 grams with generalized skin desquamation. External ophthalmology examination found a remarkable abnormal eversion in both upper eyelids with scaly skin surface surrounding it, the cilia were absent, the palpebral conjunctiva was hyperemic with notable discharge, and initial anterior segment evaluation was difficult to obtain. Antibiotic eye ointment containing combination of Polymyxin B Sulphate, Neomycin Sulphate, and Gramicidin was given every 8 hour for 1 month for supportive treatment. Resolution was visible after six days of therapy.

#### Discussion

We report resolution of bilateral congenital ectropion in HI patient by using antibiotic eye ointment. Ocular ointment comprises of mixture of semisolid and a solid hydrocarbon. The choice of hydrocarbon is dependent on biocompatibility that help to improve ocular bioavailability and sustain the drug release. Surprisingly, this treatment result in significant ectropion improvement and promotes faster desquamation of the eyelid skin within 6 days and resolution after 13 days.

#### Conclusion

Eye ointment therapy may be a potential treatment option for ectropion in patient with HI with promising cosmetic and functional result

#### Keyword

congenital ectropion, harlequin ichthyosis, eye ointment

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-19

### FUNGAL CORNEAL ULCER SUCCESSFULLY TREATED WITH TOPICAL FLUCONAZOLE AND NATAMYCIN, AND ADDITIONAL AMNIOTIC MEMBRANE TRANSPLANTATION: A CASE REPORT

#### Abstract Title

FUNGAL CORNEAL ULCER SUCCESSFULLY TREATED WITH TOPICAL FLUCONAZOLE AND NATAMYCIN, AND ADDITIONAL AMNIOTIC MEMBRANE TRANSPLANTATION: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

A fungal corneal ulcer, is an infection of the corneal stroma that can cause rapid vision loss and pain. It needs to be treated as soon as possible to preserve vision. It may be caused by filamentous (*Fusarium* or *Aspergillus* species) or non-filamentous fungi (*Candida* species).

#### Case Illustration

A 33-year-old man complaint about having pain and redness on the right eye for the last 3 weeks. The black area suddenly whitened two days later and became wider. Hyperlacrimation, discharge, and glare also exist. No known history of previous trauma. His best-corrected visual acuity (BCVA) was 1/300. Slit-lamp examination revealed an oval-shaped corneal defect at a central zone sized of 5x7.5 mm, grayish-white, dry-appearing stromal infiltrate that has regular feathery margins, ring ulcer, positively fluorescence test, and minimal hypopyon. Fungal septate hyphae are seen on gram staining. He treated with oral ketoconazole, topical fluconazole and natamycin, and additional AMT. Visual acuity then improved and the ulcer became cicatricial in one month.

#### Discussion

Our case is typical for fungal corneal ulcer by its presentation and microbiological examination. Known for its long and protracted course, there is no definitive therapy established yet and each antifungal agent has its benefits and limitations. However, in our patient, oral administration of ketoconazole, topical natamycin and fluconazole, and AMT for adjuvance, had succeeded in eliminating the infection and showing significant changes.

#### Conclusion

Our case reported that a fungal corneal ulcer is successfully treated with combination of topical natamycin and fluconazole and additional AMT.

#### Keyword

fungal corneal ulcer, fluconazole, natamycin

#### Category

E-Poster

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## Epos-IIM-20

### Localized Liquid Nitrogen Cryotherapy as Treatment for Surgically Induced Necrotizing Scleritis (SINS) After Bare Sclera Pterygium Surgery with Mitomycin-C

#### Abstract Title

Localized Liquid Nitrogen Cryotherapy as Treatment for Surgically Induced Necrotizing Scleritis (SINS) After Bare Sclera Pterygium Surgery with Mitomycin-C

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#### Abstract Type

Case Report

#### Introduction

To report cryotherapy as a potential treatment for SINS when graft resource is limited.

#### Case Illustration

A 73 year old pseudophakic man underwent a pterygium resection surgery (bare sclera) with topical mitomycin C (MMC) intraoperative in his left eye. One week after the surgery, he complained of ocular discomfort in the affected eye. Best corrected visual acuity was 20/25. Slit-lamp examination revealed extensive thinning area of avascular "porcelain-like" sclera with brownish hue showing underlying choroid layer (5x4 mm) in the nasal portion. He had no history of systemic illness or auto-immune disease. This patient showed no improvement using topical/oral medication. Since there was no resource for scleral patch graft and his conjunctiva was fragile, we treated the patient with cryotherapy. Four weeks after cryotherapy, there was no exposed choroid nor scleral thinning with fully vascularized sclera. The patient had been followed for 6 months without any recurrence of thinning.

#### Discussion

In this patient SINS might occur due to 1) multiple ocular surgeries; 2) bare sclera technique; 3) use of MMC intraoperatively, which inhibits mitotic activity of endothelial vascular cells. Treatment using topical/oral non steroid/steroid or immunosuppressive drug can be used, otherwise surgical treatment using scleral/conjunctiva graft is indicated. Cryotherapy has been described before to treat corneal descemetocoele to prevent ocular prolaps. In this case, cryotherapy helped to induce cicatrization thus prevent it from thinning. Favourable result in this patient showed after 2-4 weeks.

#### Conclusion

Cryotherapy is a potential treatment for scleral thinning due to Mitomycin-C pterygium surgery, especially when graft resource is limited.

#### Keyword

Cryotherapy, Mitomycin-C, Scleral thinning, SINS

#### Category

E-Poster

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## Epos-IIM-21

### BANANA ON THE EYE : ECCENTRIC FULLTHICKNESS PENETRATING KERATOPLASTY IN PERFORATED PERIPHERAL ULCERATIVE KERATITIS

#### Abstract Title

BANANA ON THE EYE : ECCENTRIC FULLTHICKNESS PENETRATING KERATOPLASTY IN PERFORATED PERIPHERAL ULCERATIVE KERATITIS

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#### Abstract Type

Case Report

#### Introduction

Peripheral Ulcerative Keratitis (PUK) is a crescent-shaped, destructive lesion on the perilimbal cornea which approximately 50% of its occurrence is associated with collagen vascular disease. Peripheral ulcerative keratitis signifies advanced disease that requires a thorough eye-saving procedure to preserve corneal integrity and result in minimal astigmatism if done properly.

#### Case Illustration

Female, 32 yo present with sterile perforation on the nasal peripheral cornea, with visual acuity 6/60 pHNI, shallow anterior chamber, and iris retracted to the site of perforation. The patient later diagnosed as SLE and receiving banana-shaped eccentric penetrating keratoplasty (PK) and systemic therapy from the rheumatologist. Three months after PK, corneal integrity was restored, visual acuity was 6/7.5 with minimal astigmatism on correction (Sph 0.75 Cyl - 0.50x150), and no sign of graft rejection.

#### Discussion

Corneal integrity and visual acuity were restored after eccentric PK. Postprocedural astigmatism also minimal, in contrast to the previous studies that shown higher astigmatism in eccentric compared with central PK. There was no sign of graft rejection during follow up and the comprehensive systemic therapy was shown to play a vital role. Continuous monitoring was recommended since several initial studies have shown that sterile PUK has higher rates of reperforation and graft rejection after long term period.

#### Conclusion

Eccentric PK was an effective method in treating PUK in a short term period. Compliance with systemic therapy and close follow-up was highly suggested to prevent graft rejection.

#### Keyword

Penetrating keratoplasty, Peripheral Ulcerative Keratitis, Astigmatism

#### Category

E-Poster

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## Epos-IIM-22

### THE SUCCESS OF CORTICOSTEROID THERAPY FOR VISUAL OUTCOME AND CHOROICAL TUBERCLE ON PARADOXICAL REACTION IN TUBERCULOUS LYMPHADENITIS : A CASE REPORT

#### Abstract Title

THE SUCCESS OF CORTICOSTEROID THERAPY FOR VISUAL OUTCOME AND CHOROICAL TUBERCLE ON PARADOXICAL REACTION IN TUBERCULOUS LYMPHADENITIS : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Paradoxical reaction is worsen effect of pre-existing lesion or the development of new lesion. It is commonly occurred in extrapulmonary tuberculosis, which is about 20-30% in tuberculous lymphadenitis showed by the development of posterior uveitis, such as choroidal tubercle.

#### Case Illustration

A 32-year-old man presented with sudden loss vision and central scotoma on his left eye 1 day before the admission. Previously, the patient got anti therapy tuberculosis by pulmonologist in one month for his tuberculous lymphadenitis. Ophthalmologic evaluation revealed +2 cells/flare in anterior chamber, swollen disc and choroidal tubercle that worsen the visual acuity until 2/60 on the left eye. The patient was diagnosed had paradoxical reaction in his tuberculous lymphadenitis. Topical and oral corticosteroid therapy with continuation of anti-tuberculosis therapy referred significant improvement toward visual outcome untill 20/20 and posterior pole condition in 3 months.

#### Discussion

Paradoxical reaction in tuberculous lymphadenitis is not well understood, it might be caused by bacterial spreading or hypersensitivity responses. Corticosteroid therapy with continuation of anti-tuberculosis therapy was recommended to help the improvement of visual acuity by reducing inflammation and hypersensitivity response in patient with paradoxical reaction in tuberculous lymphadenitis. This is proven by the of improvement visual acuity and choroidal tubercle regression on our patient.

#### Conclusion

Intraocular lesion can be caused by paradoxical reaction in tuberculous lymphadenitis. Early diagnosed and early corticosteroid therapy may help to save the sight of the patient.

#### Keyword

choroidal tubercle, paradoxical reaction, tuberculous lymphadenitis

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-23

### Antibiotic Prophylaxis for Gonococcal Ophthalmia Neonatorum: a Case Report

#### Abstract Title

Antibiotic Prophylaxis for Gonococcal Ophthalmia Neonatorum: a Case Report

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#### Abstract Type

Case Report

#### Introduction

Despite the current era of antibiotics and universal health care in Indonesia, cases as simple as untreated gonorrhea infection during pregnancy still exist. We will highlight a case of gonococcal ophthalmia neonatorum (GON) from a mother who has undergone antenatal care (ANC) and received prophylactic gentamycin eye drops (ED).

#### Case Illustration

A 7-day old baby was brought to the ER with yellowish eye discharge since birth. Eyelids became edematous since 1 day ago. The mother had vaginal discharge since the second month of pregnancy until vaginal birth, the complaint has been consulted during ANC at the clinic. The vaginal discharge was yellowish-white, painless, and odorless. Gram staining of the ocular discharge revealed gram negative intracellular diplococci. After birth, the baby received routine prophylactic gentamycin ED. The baby was admitted and treated for GON using cefotaxim IV and baquinor ED down-titrated daily until swabs were negative for diplococcus.

#### Discussion

Routine postnatal prophylactic topical antibiotics is mandatory in Indonesia. It is also recommended by WHO, CDC, and AAO.1 However, a study by Darling argue that the use of prophylactic topical agents for GON did not yield significant results.2 Several major countries also no longer use topical prophylaxis and rather focus on risk factor based screening in pregnant mothers, followed by prophylactic IM/IV antibiotics if necessary.3,4,5

#### Conclusion

Due to inconsistent quality of ANC in Indonesia, it is preferred to provide universal topical antibiotics for newborns. Risk factor based screening during ANC should be considered as an adjuvant to optimize GON prevention.

#### Keyword

Gonococcal ophthalmia neonatorum, neonatal conjunctivitis, antibiotic prophylaxis

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-25

### Rare Manifestations of Phthirus Pubis on the Eyelids of a Child with Chronic Blepharitis

#### Abstract Title

Rare Manifestations of Phthirus Pubis on the Eyelids of a Child with Chronic Blepharitis

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#### Abstract Type

Case Report

#### Introduction

Chronic blepharitis due to Phthirus pubis infestation is rare. This study reported a case of phthiriasis palpebrarum of a 5 years old boy.

#### Case Illustration

A 5-year-old boy came with his parents complaining of itching of the eyelids for 2 months ago. The caregiver of the patient had complaints of itching in the genitals for 6 months ago. This symptom was unresponsive to topical antibiotics started 1 month before the consultation. Examination of the eyelids revealed a lot of crabs-like lice and nits that attached to the upper eyelashes of both eyes. A papillary reaction in the tarsal conjunctival of both eyes was noted. The treatment was the mechanical removal of lice and nits by using epilation forceps. The caregiver has treated with permethrin 1% lotion once a week. There were no lice and nits in 2 weeks after.

#### Discussion

Misdiagnosis of phthiriasis palpebrarum leads to inappropriate management and increases the chance of complication to conjunctiva and cornea tissue. The treatment is mechanical lice and egg removal and medication. Pharmacologic treatment was antibiotic ointment, petrolatum jelly, or 4% pilocarpine jelly as a medium for occlusion. Giving oral ivermectin can paralyze the peripheral neurovascular system of lice. The administration of systemic therapy is indicated for the involvement of a large area of the infestation. Mechanical removal of lice and nit alone was effective in this case.

#### Conclusion

Eyelashes examination under a slit lamp or magnifying lens is important to avoid misdiagnosis of chronic blepharitis. Mechanical removal is sufficient in the management of phthiriasis palpebrarum.

#### Keyword

Phthirus Pubis, Blepharitis, Lice

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-26

### Surgically Induced Necrotizing Scleritis Following Small Incision Cataract Surgery in a Patient with Diabetes Melitus: a Case Report

#### Abstract Title

Surgically Induced Necrotizing Scleritis Following Small Incision Cataract Surgery in a Patient with Diabetes Melitus: a Case Report

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#### Abstract Type

Case Report

#### Introduction

Surgically induced necrotizing scleritis (SINS) is a rare complication following ocular surgeries which presents as an intense scleral inflammation occurring at the site of surgery. We report a case of SINS following a small incision cataract surgery (SICS) in a diabetic patient.

#### Case Illustration

A 63-year-old diabetic man presented with pain in his left eye three months after undergoing SICS. Slit lamp examination revealed inflamed and slightly thinning sclera at the site of surgery. The patient received topical levofloxacin, topical steroid and oral levofloxacin. At two months follow up, the sclera showed progressive thinning and enlarged necrosis with uveal show. The patient was diagnosed with SINS and started on high dose oral methylprednisolone. Oral steroid was stopped due to scleritis still progressing with enlarged scleral thinning. The patient then was administered with topical oxytetracycline and eye lubricant. Two months later, the scleral inflammation regressed with smaller patch of scleral thinning.

#### Discussion

SINS is a devastating complication following cataract surgery. It is believed as local autoimmune reaction associated with delayed hypersensitivity response to surgical trauma. It is also associated with systemic diseases such as diabetes mellitus. Immunosuppressive therapy is the key treatment for SINS. In this case, the patient did not respond well to topical and oral steroid. Oxytetracycline has non antibiotic properties as collagenase inhibitor that is believed to facilitate collagen synthesis in this patient.

#### Conclusion

SINS must be considered as a differential diagnosis in patients with scleral inflammation at the site of previous ocular surgery. Early diagnosis and prompt management prevent morbid complications.

#### Keyword

surgically induced necrotizing scleritis, small incision cataract surgery, diabetes

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-27

### Two Cases of Photokeratitis Induced by Ultraviolet Disinfection Lamp during Covid-19 Pandemic

#### Abstract Title

Two Cases of Photokeratitis Induced by Ultraviolet Disinfection Lamp during Covid-19 Pandemic

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#### Abstract Type

Case Report

#### Introduction

During the ongoing pandemic Covid-19, the Ultraviolet (UV) disinfection lamps became widely used. Nevertheless, UV radiation is one of the several environmental hazards that may cause inflammatory reactions in eyes, especially cornea.

#### Case Illustration

Twenty five-year-old and thirty eight-year-old males came to our clinic with similar complaints of bilateral ocular pain, foreign body sensation, tearing, photophobia, swelling and redness of the eye. The symptoms occurred after exposing to the UV disinfection lamp in their office approximately 30 minutes within 12 hours before symptom onset. The patients were referred to the ophthalmologist, the slit lamp examination showed conjunctival injection and corneal epithelial erosion, fluorescence examination showed multiple corneal erosions. Fundus examination are remarkable. All cases were treated with polyvinylpyrrolidone, levofloxacin, vitamin A palmitate 10 mg eye drop and vitamin C tablet. Symptoms were resolved later after control visit.

#### Discussion

Levels of ultraviolet irradiance reaching the eye may exceed the damage threshold under a number of circumstances. The initial symptoms of photokeratitis are due to lost or damaged epithelial cells leading to a gritty feeling in the eye with photophobia, foreign body sensation, tearing, blurred vision. There is currently no consensus among ophthalmologists regarding best practice for the treatment of photokeratitis.

#### Conclusion

The role of UV disinfection lamps in ocular diseases is an important public health issue in this pandemic era. The strict guidance and enforcement of UV disinfection lamp utilization safety protocols are needed to avoid the potential public health risk.

#### Keyword

Photokeratitis, Ultraviolet, Covid-19

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-28

### Clinical Manifestation and Treatment of Bilateral Ocular Toxoplasmosis

#### Abstract Title

Clinical Manifestation and Treatment of Bilateral Ocular Toxoplasmosis

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Kezia Eveline ()

#### Abstract Type

Case Report

#### Introduction

Ocular toxoplasmosis is one of the most common cause of infectious posterior uveitis caused by an intracellular parasite, *Toxoplasma gondii*. In this case we report the clinical manifestation and treatment of bilateral ocular toxoplasmosis.

#### Case Illustration

A 26-year-old woman complained blurry in both eyes. Right eye had been blurred since 5 years ago and left eye happened since a week before. Right eye was 50 cm counting fingers and left eye was 6/20 pinhole not improved. Fundus examination in the right eye showed wide atrophic and pigmented retinochoroidal scar at foveal area. Left eye showed vitritis with white yellowish lesion of retinitis at the superior retina, outside the foveal area.

#### Discussion

The aim of the treatment was to inhibit multiplication of the parasite during the active stage and to minimize damage to the intraocular tissues. We treated patient with trimethoprim (160 mg)-sulfamethoxazole (800 mg) 2 times daily for 6 weeks and methyl prednisolone 1 mg/Kg body weight started at third day of treatment, tapered off per weeks. Serology test of anti-*Toxoplasma* showed Immunoglobuline M negative and Immunoglobuline G positive. Six weeks after treatment, right eye was still 50 cm counting fingers and left eye improved to 6/7.5.

#### Conclusion

Ocular toxoplasmosis is the most common cause of infectious posterior uveitis and the diagnosis is made by clinical findings in the majority of the cases. But if the clinical diagnosis cannot be made definitely by clinical findings, serological tests including serum anti-*Toxoplasma* titers of IgM and IgG may be needed to support the diagnosis.

#### Keyword

ocular toxoplasmosis, bilateral, vitritis, posterior uveitis

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-29

### The Use of Povidone-Iodine as Treatment for Viral Conjunctivitis in Poor Resources Area: An Evidence Based Case Report

#### Abstract Title

The Use of Povidone-Iodine as Treatment for Viral Conjunctivitis in Poor Resources Area: An Evidence Based Case Report

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#### Abstract Type

Case Report

#### Introduction

Conjunctivitis is the most common eye disease in daily basis. Without treatment it can cause blindness. Currently there are no approved treatments for adenoviral conjunctivitis. Poor resources area have limited access to proper treatment. Povidone-iodine is widely used as antimicrobial agents in any health practice. This study determines the usage of povidone-iodine for eye infection in poor resources area.

#### Case Illustration

37 years old man came to primary health service with red eye, dry sensation, and itchiness since 4 days ago. Patient was treated with dexamethasone eye drop for 3 days without any improvements and had to be referred to higher health service because there were no other treatment available. Patient refused to be referred and requested any possible medication from the primary health service. Recent studies suggest that povidone-iodine are effective in management of viral conjunctivitis in poor resources area.

#### Discussion

Thorough search was performed in 3 electronic databases, which included Keywords "povidone-iodine", "keratitis", "conjunctivitis", and "keratoconjunctivitis". Selected studies were critically appraised with Oxford Centre for Evidence-Based Medicine worksheet. Two articles chosen for review were both valid and applicable. Randomized Control Trials (RCT) from PePOSE et al. shows significant different in effectiveness of povidone-iodine/dexamethasone compared to placebo, clinical resolution (P=0.0158) and viral eradication (P=0.0186) achieved. Kovalyuk et al. also showed a significant change (P

#### Conclusion

Povidone-iodine should be considered as added treatment for viral conjunctivitis in poor resources area which always be available in any health care service.

#### Keyword

Povidone-Iodine, Viral Conjunctivitis, Poor Resources Area

#### Category

E-Poster

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## Epos-IIM-30

### BILATERAL RAPIDLY DETERIORATING CAVERNOUS SINUS THROMBOSIS IN A DIABETIC PATIENT: A DIAGNOSTIC CHALLENGE

#### Abstract Title

BILATERAL RAPIDLY DETERIORATING CAVERNOUS SINUS THROMBOSIS IN A DIABETIC PATIENT: A DIAGNOSTIC CHALLENGE

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#### Abstract Type

Case Report

#### Introduction

Cavernous Sinus Thrombosis (CST) is an ocular emergency and can potentially lead to serious systemic complications. The patient can be severe enough and threatens not only the vision but also life. We report a case of bilateral cavernous sinus thrombosis that need emergent diagnosis and treatment with multidisciplinary approach.

#### Case Illustration

A 57 year-old female diabetic patient came to the emergency room with blurred vision of both eyes. Two weeks before, she had a gingival abscess in the right upper maxillary gum, fever, general weakness, and headache. One week after, the RE started to become blurry, ptosis and slightly protruding. Later on, the LE started to become blurry and unable to move. On examination, the patient was somnolent, harlequin-face with no light perception in both eyes. There were ptosis, proptosis, chemotic, cork-screw vessels, and corneal ulcer in the RE. The LE showed a cherry-red spot consistent with central retinal artery occlusion. Laboratory results showed marked leucocytosis, high procalcitonin, fibrinogen, and d-dimer. Urine culture result was Candida albicans. Contrast-enhanced CT scan showed dilated right ophthalmic vein suggesting CCF.

#### Discussion

Clotting of the cavernous sinus may have originated by surrounding facial, sinus, or dental ascending infection. More than 90% of CST was caused by bacterial infection, but in our case, it is suggested to be caused by fungal infection. Headache, fever with rapid-onset proptosis, ptosis, ophthalmoplegia, and reduced vision may be encountered.

#### Conclusion

The efforts to promptly diagnose CST require a high index of suspicion. Severe morbidity and mortality can arise due to CST.

#### Keyword

Cavernous sinus thrombosis, diabetes mellitus, infection

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-IIM-31

### Hutchinson's Sign of Herpes Zoster Ophthalmicus

#### Abstract Title

Hutchinson's Sign of Herpes Zoster Ophthalmicus

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#### Abstract Type

Case Report

#### Introduction

Herpes Zoster Ophthalmicus (HZO) is reactivation of VZV in the ophthalmic division (V1) of the trigeminal nerve. HZO occurs in 25% of cases of HZ. It has the potential to generate severe complications such as corneal ulcers, uveitis, retinal necrosis and post herpetic neuralgia. HZO is considered an ophthalmologic emergency. Some clinical manifestation can help clinician to recognize ocular involvement. Early treatment can prevent further complication.

#### Case Illustration

A 33-year-old man presented to ED with 3-day history of facial pain and rash on his right forehead, eye and nose. He also complained malaise and fatigue for 1 week. He gave history of chickenpox in his childhood. On local examination, he showed multiple crusted blisters on his right lateral aspects of nose and tip of nose. Periorbital edema was present, but vision was not affected. This finding was consistent with Hutchinson's sign. The patient was diagnosed with HZO. The patient was treated with oral and ophthalmic topical antiviral, and other supportive agent. Follow up at the third and tenth day after treatment, the patient had made excellent recovery. The patient reported no ocular symptom and postherpetic neuralgia.

#### Discussion

Hutchinson's sign (HS) is the presence of vesicular lesions on the side or tip of the nose. HS predicts about a 76% chance of ocular involvement, while a negative Hutchinson's sign still has about a 34% chance of ocular involvement. It occur because of the shared innervation by the nasociliary branch of the V1 nerve.

#### Conclusion

Hutchinson's sign is a strong predictor of ocular involvement of HZ.

#### Keyword

Herpes Zoster, Shingles, Herpes Zoster Ophthalmicus, Hutchinson's Sign

#### Category

E-Poster

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## Epos-IIM-32

### A Case Report Of Infectious Neuroretinitis : Was It Caused By Rubella, Toxoplasma, Or Even Both?

#### Abstract Title

A Case Report Of Infectious Neuroretinitis : Was It Caused By Rubella, Toxoplasma, Or Even Both?

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#### Abstract Type

Case Report

#### Introduction

Neuroretinitis was an inflammatory condition characterized by optic disc edema and a formation of a macular star figure. The infectious etiologies of neuroretinitis, including rubella and toxoplasma. The objective of this case report was to present this unusual causes of neuroretinitis.

#### Case Illustration

A 29-years-old man came with a sudden blurred vision on his right eye six weeks before admission, and fever with rash one week before the complaint. The visual acuity of the right eye was 5/20 with pinhole not improved, and the left eye was 5/5. The RAPD was present on the right eye. Optic nerves of both eyes appeared swollen, hyperaemic with blurred margins, and macular exudates presented on the right eye. OCT revealed an increase of RNFL thickness on both eyes. Laboratory results showed positive IgG rubella and toxoplasma. Based on the examination, a diagnosis of rubella and toxoplasma associated neuroretinitis was made. Treatment was initiated with high-dose methylprednisolone and neuroprotector, resulting in visual acuity improvement and decreased appearance of macular exudates.

#### Discussion

This case presented neuroretinitis with rubella and toxoplasma infection, although it was rare, it should be considered in infectious neuroretinitis. The treatment was a high-dose oral corticosteroid. The role of corticosteroids was to suppress the inflammation and minimize chorioretinal damage. In immunocompetent patients, toxoplasma and rubella related infection was a self-limited infection with supportive therapy.

#### Conclusion

Neuroretinitis with rubella and toxoplasma infections was a rare condition. Awareness of the specific causes of neuroretinitis might enable a prompt diagnosis. Appropriate and effective therapy would give a good outcomes.

#### Keyword

Neuroretinitis, Rubella, Toxoplasma

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-33

### A Rare Case of Bilateral Dacryoadenitis with Suspicious Underlying Pansinusitis

#### Abstract Title

A Rare Case of Bilateral Dacryoadenitis with Suspicious Underlying Pansinusitis

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#### Abstract Type

Case Report

#### Introduction

This case is aimed to demonstrate a rapid and successful treatment of a rare occasion of bilateral dacryoadenitis.

#### Case Illustration

Female, 23 years old came with chief complaints of swollen eyelid of both eyes. Patient felt blurred vision, dizziness, and watery discharge. Ophthalmological examination showed decreased visual acuity with lid swelling and chemotic conjunctiva of both eyes, along with restricted ocular movement. Remarkable laboratory result includes leukocytosis (20.000/uL), high total IgE (193.1 IU/mL), elevated CRP-quantitative (61.7 mg/L), and slightly high procalcitonin (0.08 mg/dL). Orbital CT-scan examination showed bilateral enlargement of lacrimal glands and contrast enhancement surrounding the glands, with pansinusitis. Albeit initial presumption of orbital cellulitis, patient was diagnosed as bilateral dacryoadenitis with mild pansinusitis as the underlying cause. Pseudotumor was ruled out as suggested by the result of CT-scan. Patient was given intravenous antibiotics of ceftriaxone, levofloxacin eyedrop, and high dose intravenous methylprednisolone. Result showed tremendous healing in less than five days, with complete resolve on lid swelling alongside recovery of vision.

#### Discussion

Correctly identifying the etiologies of infection is a turnover point in this case. Nasal discharge with sinusitis indicated any hints of spread from periorbital structures. Paranasal sinuses, globe, lacrimal sac were often the main port d'entrée for infection. Close anatomic relationship between each group of paranasal sinuses and orbital cavity is the possible reason for this spread.

#### Conclusion

Bilateral dacryoadenitis is a rare case and proposes a variable differential diagnosis, thus thorough diagnostic testing and examination are required. Earlier diagnosis and prompt treatment propose a better prognosis for the patient.

#### Keyword

Bilateral dacryoadenitis, orbital cellulitis, pansinusitis

#### Category

E-Poster

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## Epos-IIM-34

### MANAGEMENT OF CORNEAL ULCERATION WITH DESCEMETOCELE AND IMPENDING PROLAPS : A CASE REPORT

#### Abstract Title

MANAGEMENT OF CORNEAL ULCERATION WITH DESCEMETOCELE AND IMPENDING PROLAPS : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Corneal ulcers are considered an ophthalmologic emergency because of their potential to permanently impair vision or perforate the eye. The therapeutic management includes medical therapy and in case of failure, surgical care such as amniotic membrane transplantation.

#### Case Illustration

A 38-years-old female complained about blurred on the right eye since 15 days before admission after got exposed an insect (ant) when riding a motorcycle. Patient explained that she has got redness, pain, foreign body sensation, difficult to open her eyes, and tearing. On her first visit, visual acuity was light perception on right eye with IOP soft palpation on it and 6/6 on left eye with IOP normal palpation on it. Segment anterior examination of the right eye showed spasm and edema palpebra. Slitlamp examination showed hyperemia conjungtiva, corneal haziness, fluorescein test about 10 mm stromal depth and descemetocoele 4 mm at central cornea. There was normal siedel test without leakage. A diagnosis of right eye corneal ulceration with descemetocoele and impending prolaps was made based on clinical presentation.

#### Discussion

Medical therapy is a useful adjunct but surgical approach is required for most cases of corneal perforations. After the amniotic membrane transplantation, the favorable evolution in our case was due to the unique combination of priority that the membrane had, including the facilitation of migration of the epithelial cells, the ability to modulate stromal scarring and its anti-inflammatory and anti-bacterial activity.

#### Conclusion

The complexity of corneal ulceration with descemetocoele and impending prolaps required to be assessed and managed appropriately to achieve a better outcome.

#### Keyword

Corneal Ulceration, Descemetocoele, Impending Prolaps,

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-35

### Sympathetic Ophthalmia in Perforated Corneal Ulcer

#### Abstract Title

Sympathetic Ophthalmia in Perforated Corneal Ulcer

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

This case report is aimed to present a challenging management of sympathetic ophthalmia (SO) preceded by perforated corneal ulcer.

#### Case Illustration

A 21-year-old female, came with the chief complaint of blurry vision of the left eye since 12 days prior to admission. There was an unclear history of trauma. The ophthalmological examination revealed perforated corneal ulcer on her left eye with visual acuity of hand movement good projection. She underwent iris reposition and direct closure surgery for her left eye. Four weeks post-surgery, the patient complained blurry vision of the fellow eye. On the examination, her left eye was re-perforated and the fellow eye showed signs of panuveitis with visual acuity 1/60. After establishing infection and immunological work-up, she was diagnosed with SO. She underwent the second surgery of corneal patch graft and amniotic membrane transplantation for her left eye. The SO was treated with corticosteroids and methotrexate. The visual acuity of the sympathizing eye improved to 6/45.

#### Discussion

Ocular surgery and perforated corneal ulcer are indeed rising in number as the precipitating event of SO instead of trauma. There is also a shifting trend in the prevention of SO. A proper closure of the globe is as efficient as enucleation to prevent SO. High dose systemic corticosteroids remain the main treatment for SO.

#### Conclusion

The changing trend in the causative event and treatment of SO should be taken with caution. The existence of infection on the exciting eye is not an obstacle give high dose systemic corticosteroids for the treatment of SO.

#### Keyword

corneal ulcer, sympathetic ophthalmia

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-36

### Early Management of Endogenous Panophthalmitis in Primary Care : A Case Report

#### Abstract Title

Early Management of Endogenous Panophthalmitis in Primary Care : A Case Report

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Panophthalmitis is the widest infection of the periocular tissue. It often spread by endogenous. This can be closely related to systemic disease, especially in people with uncontrolled diabetes mellitus. The systemic blood flow in patients with type II diabetes mellitus is often impaired due to high blood sugar levels. This disorder will reduce the immune system in the eye area and bacteria spread more quickly.

#### Case Illustration

We report a case of a woman with uncontrolled diabetes mellitus type II. She came to Soreang Hospital. She complained loss of vision, swelling, redness and painful of the right eye since 3 days ago. The visual acuity of 1/~ in right eye and 6/20 in left eye. We found the anterior segment of the right eye suggestive of panophthalmitis. Blood tests show uncontrolled high blood sugar levels.

#### Discussion

Our patients are treated together with internal medicine doctor to control her blood sugar level. The patient receives systemic broad spectrum antimicrobial therapy. The patient was treated for several days until the signs of inflammation improve. The visual acuity also improves to 1/300 in the right eye. Due to limited facilities in primary care, we referred the patient to eye center for further examinations such as CT scan and bacterial culture. In addition, to proceed with further surgery if needed.

#### Conclusion

Early initial treatment in primary care is very important in preventing patient morbidity. Collaboration between ophthalmologists and internal medicine doctors is needed, considering that the main trigger of this disease is systemic disease.

#### Keyword

diabetes mellitus, endogenous panophthalmitis, panophthalmitis, primary care

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-IIM-37

### Neglected Eye Infection and Spontaneous Corneal Perforation in Emergency Cases: Case Report and Literature Review

#### Abstract Title

Neglected Eye Infection and Spontaneous Corneal Perforation in Emergency Cases: Case Report and Literature Review

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#### Abstract Type

Case Report

#### Introduction

Corneal perforation is a rare sight-threatening ocular morbidity. Expulsion of the intraocular contents occurs through the eye wall, leading to devastating outcome. Corneal ulcers are 10 times more common in the developing countries. Significant percentage of patients with keratitis and corneal ulcer referred to hospital with corneal perforation. Agriculture related trauma and use of traditional eye medicine is the risk factors for corneal ulceration.

#### Case Illustration

A 72 years old man came to emergency room with pain and bleeding on the left eye for 5 hours. One-month earlier patients left eye was exposed to plant, pain and blurred vision sometimes complained but patient didn't seek for treatment. There was no history of other eye disease. Examination shows no light perception on the left eye and normal on the right eye, within normal limit of IOP. Left anterior eye chamber shows chemosis, corneal rupture and uveal prolapse. Evisceration was prepared immediately, patient treated with painkiller and antibiotic first.

#### Discussion

Non-traumatic disorders such as infections can lead to corneal perforation without immediate treatment. Outdoor occupation, foreign body history, plant matter trauma which present in this case are the significant characteristics associated with perforated corneal ulcer. Conditions associated with epithelial defect such as dry eye syndrome which is common in elderly and the use of traditional or over the counter drugs may lead to corneal perforation.

#### Conclusion

Eye infection should be treated immediately and closely monitored to prevent permanent loss of eye as shown by this case.

#### Keyword

Corneal perforation, corneal ulcer, uveal prolapse

#### Category

E-Poster

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## Epos-IIM-38

### LIFITEGRAST OPHTHALMIC SOLUTION 5% FOR THE TREATMENT OF DRY EYE DISEASE: A SYSTEMATIC REVIEW

#### Abstract Title

LIFITEGRAST OPHTHALMIC SOLUTION 5% FOR THE TREATMENT OF DRY EYE DISEASE: A SYSTEMATIC REVIEW

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#### Abstract Type

Research

#### Introduction & Objective

Dry eye disease (DED) is a common chronic inflammatory disease of the ocular surface caused by multiple factors that results in symptoms of eye discomforts, visual disturbances, and dryness due to tear film instability. Lifitegrast ophthalmic solution 5% is a new drug that has been approved by the US Food and Drug Administration (FDA) in 2016 for the treatment of DED. Lifitegrast is a novel integrin antagonist which works by inhibiting the inflammatory pathways in DED. The objective of this study was to systematically review the literature of lifitegrast ophthalmic solution 5% in the treatment of DED.

#### Method

This systematic review was conducted by searching on Pubmed, Embase, Cochrane Library Databases, Science Direct, and Google Scholar. The inclusion criteria of this study were English-language published literatures, human subject research, and randomized controlled trial study. Outcome measures included Ocular Surface Disease Index (OSDI) score, corneal fluorescein staining score, eye dryness score (EDS), and adverse events of the drug.

#### Result

Five studies evaluating a total of 2558 individuals were included in this study. Two studies reported that lifitegrast showed significant improvements in corneal staining score and total OSDI. Two studies reported that lifitegrast showed greater improvement in EDS than placebo. One study reported that lifitegrast was safe in patients with DED. The most common adverse event of this medication was instillation site irritation.

#### Conclusion

Lifitegrast seemed effective and safe for the treatment of DED. However, further study with larger sample size, better-defined group, and more comparative effectiveness research is needed to obtain more conclusive result.

#### Keyword

dry eye disease, integrin antagonist, lifitegrast

#### Category

E-Poster

#### Latest Update

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## Epos-IIM-39

### OCULAR SYPHILIS ON THE RISE: A CASE REPORT

#### Abstract Title

OCULAR SYPHILIS ON THE RISE: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Rise on syphilis incidence is a matter of concern in today's health world. We will present one new case of mixed ocular syphilis with cytomegalovirus in an HIV positive patient

#### Case Illustration

Male, 48 years old, with bilateral blurring of vision for five months, accompanied by redness of both eyes, fever, oral thrush and skin rashes both in plantar region. The patient was HIV positive with multiple male sex with male behavior. Examination revealed panuveitis characteristic of both eyes. The serologic test results were negative at the beginning but turns to be reactive after diluting the titration fold. The patient received therapy based on the syphilis guideline, topical medication (atropine sulphate & prednisolone acetate), and ganciclovir due to the CMV positive result. There was an occurrence of Jarisch-Herxheimer reaction but managed properly. The visual acuity improved from light perception OU to 6/60 OD and 6/18 OS

#### Discussion

Syphilis can mimic other types of diseases so we must be more thorough when performing the examination. Treatment can be given following the guidelines and make additional therapy from a positive examination result. However, we must also be aware of the prozone effect and Jarisch-Herxheimer reaction that may arise. Ocular syphilis as one of the syphilis manifestation, also have a good result when treated properly.

#### Conclusion

There is a strong connection between the rise of syphilis and lifestyle trends today. Syphilis is a complex disease, but with a strong knowledge based on proper examination and treatment, it will produce a good outcome.

#### Keyword

Ocular syphilis, prozone effect, Jarisch-Herxheimer reaction

#### Category

E-Poster

#### Latest Update

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## Epos-KBR-01

### TECTONIC PENETRATING KERATOPLASTY IN CORNEAL PERFORATION OF ONLY EYE IN AN ELDERLY PATIENT

#### Abstract Title

TECTONIC PENETRATING KERATOPLASTY IN CORNEAL PERFORATION OF ONLY EYE IN AN ELDERLY PATIENT

#### First Author

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#### Author Institution

RS Mata M77

#### Co Author

#### Abstract Type

Case Report

#### Introduction

Corneal perforation and rarity of corneal donor often pose problem in developing countries. In this case we disclose a decision to save remaining vision on a one-eyed elderly male patient by performing tectonic penetrating keratoplasty.

#### Case Illustration

A 65 year-old male came to the hospital with protrusion of dark matter on his right eye (RE) since 3 days earlier. No history of trauma, diabetes mellitus, nor hypertension were found. His left eye already lost vision years before but he never consulted an ophthalmologist. He could perceive hand motion on RE. On examination of the RE we found a 5-mm size iris prolapse with loss of corneal tissue with some hint of previous scar. Flat anterior chamber, hazy lens were found. Ultrasound examination revealed a clear vitreous and flat retina. The patient's LE was phthisical with no light perception. We decided to perform tectonic penetrating keratoplasty (TPK) on this one-eyed patient.

#### Discussion

The patient underwent TPK in General Anesthesia after testing negative for Covid-19. The perforation was located inferior and temporal, thus the difficulty in trephining the precise part of the donor cornea. We had to perform some ad-lib refining of the corneal donor to fit the recipient's eye. Tarsorrhaphy was done at end of the surgery. Visual acuity was HM 1 week post-operatively with formed anterior chamber.

#### Conclusion

Although the prognosis is dubious, we decided to save the patient's remaining vision and prevent future infection with tectonic penetrating keratoplasty on RE considering there is no vision left on his LE.

#### Keyword

tectonic, penetrating keratoplasty, corneal perforation

#### Category

Free Paper Presentation

#### Latest Update

July 19, 2020

#### Status

Submitted

## Epos-KBR-02

### Clear Lens Phacoemulsification For High Myopia Correction

#### Abstract Title

Clear Lens Phacoemulsification For High Myopia Correction

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#### Abstract Type

Case Report

#### Introduction

High myopia correction with clear lens extraction, with or without IOL implantation, remains controversial and associated with a high risk of postoperative complications, especially retinal detachment. However, advanced technology development in the cataract surgery field had resulted in excellent surgical outcomes with a very low complication rate. In this article, we will present an outcome of clear lens phacoemulsification for high myopia correction on four eyes of two patients.

#### Case Illustration

Two women with high myopia undergone clear lens phacoemulsification with supracapsular tilt and tumble technique. IOL calculation using SRK-T formula. Both patients had 20/20 postoperative visual acuity in both eyes, which remains until one year postoperative—no retinal abnormalities found in both patients.

#### Discussion

Clear lens phacoemulsification is a simple and effective technique for the correction of high myopia because it has a high predictability if the calculation of power IOL is carried out correctly and postoperative vision improvement remains stable over a long period. The choice of the IOL calculation formula is crucial in achieving emetropic vision in eyes with extreme axial length. The SRK/T formula is preferred for eyes with an axial length longer than 26 mm to obtain correct IOL power. Emulsification and aspiration of the lens was done in the anterior to the iris plane so the probe positions was away from the lens posterior capsule so it's decreasing the risk of posterior capsule rupture and vitreous prolapse.

#### Conclusion

Clear lens phacoemulsification for high myopia correction was an effective procedure and gave an excellent visual outcome for a long-term period.

#### Keyword

Clear lens extraction, phacoemulsification, high myopia, tilt and tumble, retinal detachment.

#### Category

Free Paper Presentation

#### Latest Update

July 20, 2020

#### Status

Submitted

### Epos-KBR-03

## PENETRATING KERATOPLASTY FOR CORNEAL DYSTROPHY: TWO CASE SERIES

#### Abstract Title

PENETRATING KERATOPLASTY FOR CORNEAL DYSTROPHY: TWO CASE SERIES

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#### Abstract Type

Case Report

#### Introduction

The prevalence of corneal disease which causes visual impairment and blindness globally are 1.65% and 3.46%. Corneal transplantation refers to the replacement of disease host corneal tissue by healthy donor cornea.

#### Case Illustration

Patient I a 72 years old woman presented with blurred vision post keratoplasty the second time ocular sinistra (OS) in 2019 and post keratoplasty first time ocular dextra (OD) in 2014 with history of corneal dystrophies. On examination of eyes, visual acuity (VA) OD was 6/60, VA OS was 1/300, NCT ODS normal, corneal haze (+) in OS and suture in situ (+) ODS. This patient was clinically diagnosed with post keratoplasty ODS and corneal rejection OS. Patient was planned for penetrating keratoplasty OS. Patient II a 59 years old woman presented with blurred vision, slowly progressive and increase with age. On examination of both eyes, VA OD was 0.50/60, VA OS was 6/36 pinhole 6/18, NCT ODS normal, corneal edema (+) ODS. This patient was clinically diagnosed with corneal dystrophy ODS. This patient was planned for penetrating keratoplasty OD.

#### Discussion

A corneal graft (keratoplasty) may be partial-thickness (anterior or posterior lamellar) or full-thickness (penetrating). The indication for PK in these case were corneal rejection and corneal dystrophies. Penetrating keratoplasty remains commonly performed and is the appropriate procedure for disease involving all layers of the cornea. Post operative management include topical antibiotics, topical steroid, cyclopegia.

#### Conclusion

Penetrating keratoplasty is still the procedure of choice for visual rehabilitation of patients with corneal blindness that can't be cured with other treatments.

#### Keyword

Keratoplasty, Corneal, Dystrophy

#### Category

E-Poster

#### Latest Update

July 20, 2020

#### Status

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### Epos-KBR-04

## GREYISH RING AT POSTERIOR LENS CAPSULE FOLLOWING BLUNT TRAUMA

#### Abstract Title

GREYISH RING AT POSTERIOR LENS CAPSULE FOLLOWING BLUNT TRAUMA

#### First Author

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

We report a 7-year-old boy with a rare complication of hyphema resulting in hemosiderosis in the posterior capsule of the lens.

#### Case Illustration

A 7-year-old boy presented to the office with a history of hyphema caused by a blunt trauma to the right eye after being hit by a shuttlecock right in front his eye 2 weeks ago. The best corrected visual acuity was 20/30 in the right eye and 20/20 in the left eye. On slit-lamp examination, anterior chamber was silent, no pigment deposition the endothelial side of the cornea (Krukenberg's spindle), no traumatic iritis present. With dilated pupil, ocular examination revealed a clear lens with an annular hemosiderosis on the posterior capsule in the right eye.

#### Discussion

Hyphema defined as the presence of blood within the aqueous fluid of the anterior chamber. Weiger ligament attach the posterior lens capsule to the anterior cortical of the vitreous. Our patient presented unique features because to the best of our knowledge hemosiderosis to the posterior capsule is never reported before. The mechanism we proposed were the blood from the hyphema was spilled from the anterior chamber to the posterior chamber, went through the zonules and imbibed to the posterior capsule which respect the line of Weiger ligament attachment so that it formed an annular structure.

#### Conclusion

In conclusion, posterior capsule imbibition can be a complication of the spill over hyphema to the posterior segment of the eye. Careful follow up and documentation was to be taken to assess the progression of the mechanism.

#### Keyword

Hyphema, Weiger ligament, Lens

#### Category

E-Poster

#### Latest Update

July 29, 2020

#### Status

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## Epos-KBR-05

### RETAINED INTRALENTICULAR FOREIGN BODIES : TO TREAT OR TO LEAVE

#### Abstract Title

RETAINED INTRALENTICULAR FOREIGN BODIES : TO TREAT OR TO LEAVE

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#### Abstract Type

Case Report

#### Introduction

The frequency of IOFBs following penetrating eye injuries is approximately 40%. The incidence of intralenticular foreign bodies is approximately 5% to 10%.<sup>1</sup> The timing of intervention is primarily determined by the chemical composition of the foreign body and the potential for infection.

#### Case Illustration

Male, 27 yo came after floating plastic drum explosion 2 days before admission. Visual acuity was 1/60 RE and 1/300 LE. Intraocular pressure LE was 5 mmHg. There were coral, plastic, and sands foreign bodies on the edematous cornea. The patient was planned for foreign body extraction, debridement, and exploration due to suspected scleral rupture. There was intralenticular foreign body found on the exploration and the lens extraction was not done. Three months after, the visual acuity was 6/18 RE and 6/7.5 LE with mild cataract without any sign of infection.

#### Discussion

In this case, after the exploration and corneal foreign body extraction, we treat the intralenticular foreign bodies conservatively because there are no additional severe complications other than peripheral and localized lens opacity with an acceptable visual acuity. Three similar approaches has been reported and the follow-up times were 1 year, 60 years, and 30 years in these three cases, respectively

#### Conclusion

In the case of inert materials and no sign of intraorbital infection, intralenticular foreign bodies may be left undisturbed and closely followed up for the development of any complication.

#### Keyword

inert, intralenticular, foreign body

#### Category

E-Poster

#### Latest Update

August 02, 2020

#### Status

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## Epos-KBR-06

### CORNEAL TOPOGRAPHIC CHANGES IN POST-LASIK PATIENT

#### Abstract Title

CORNEAL TOPOGRAPHIC CHANGES IN POST-LASIK PATIENT

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#### Abstract Type

Case Report

#### Introduction

Corneal topography is a non-invasive exploration morphology quantitatively and qualitatively, so that it can assess the characteristics and differentiation of corneal geometry

#### Case Illustration

A 18 years-old man, about 5 years ago the visions of the patients began to slowly blur without red eye, headache (+) especially on orbital region, so he went to the ophthalmologist and was prescribed glasses

#### Discussion

The pre-operative right corneal topography results were steep K = 43.46 D, flat K = 42.30 D on axis 340. Astigmatism value = 1.16 D. Preoperative left corneal topography steep K = 43.63 D, flat K = 42.48 D on axis 1680 astigmatism = 1.15 D. Axial curvature mapping obtained regular type with a steep inclination on the superior side of the cornea. The value of the patient's spherical factor before surgery = 0.33 while after surgery = -0.40. The left cornea of the patient before and a week after surgery was also spherical. In this patient there was also a slightly flattened corneal change than before surgery

#### Conclusion

We found significant change in topography when compared between before and after LASIK surgery, both from the axial curvature values obtained on the pre-operative and post-operative examinations. With the results of axial curvature mapping, a regular type with a tendency to the superior side of the cornea tends to steep. In this second mapping, the patient's cornea before and a week after surgery was spherical and the corneal changes were slightly flattened than before surgery

#### Keyword

corneal topographic, post-LASIK patients, corneal changes

#### Category

E-Poster

#### Latest Update

August 10, 2020

#### Status

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## Epos-KBR-07

### MULTIPLE SURGICAL PROCEDURES FOR COMPLICATED TRAUMATIC CATARACT: A CASE REPORT

#### **Abstract Title**

MULTIPLE SURGICAL PROCEDURES FOR COMPLICATED TRAUMATIC CATARACT: A CASE REPORT

#### **First Author**

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#### **Author Institution**

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#### **Co Author**

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Clara Valentina (Bali Mandara Eye Hospital)

#### **Abstract Type**

Case Report

#### **Introduction**

Traumatic cataract is the major cause of monocular blindness in developing countries which may present along with various ocular damages from anterior to posterior segment.

#### **Case Illustration**

A 55-year-old man presented with a sudden decreased vision in the left eye secondary to a blunt ocular trauma with stone. Ophthalmologic examination revealed left eye visual acuity (VA) was 1/60 which was worsening after one week followed with the increasing of intraocular pressure (IOP). A large iridodialysis, "D-shaped pupil", zonulysis, lens opacity, and vitreous prolapse were observed on slit lamp examination. We performed iridodialysis repair followed by anterior vitrectomy via limbus. Phacoemulsification with stop and chop technique was performed, as well as capsular tension ring (CTR) insertion and intraocular lens (IOL) implantation in capsular bag. Final VA at one month follow up was 6/60 with normal IOP. Intraocular lens position remained stable in the pupil center.

#### **Discussion**

Definitive treatment of traumatic cataract is surgery. However, management of traumatic cataract is challenging, as it is often complicated by coexisting ocular pathology. The cataract extraction and correction of dialyses are necessary for optimal visual recovery and anatomic restoration. Phacoemulsification remains a successful technique for treating traumatic cataract. Capsular tension ring can be inserted into capsular bag during cataract surgery to compensate and give support to the area of zonulysis.

#### **Conclusion**

Management of traumatic cataract remains challenging because it is often accompanied by coexisting ocular damages. Therefore, a comprehensive examination is required preoperatively to determine the factors that can affect the outcome.

#### **Keyword**

traumatic cataract, iridodialysis repair, phacoemulsification

#### **Category**

E-Poster

#### **Latest Update**

August 12, 2020

#### **Status**

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## Epos-KBR-08

### Goldenhar Syndrome With Limbal Dermoid Cyst : A Case Report

#### **Abstract Title**

Goldenhar Syndrome With Limbal Dermoid Cyst : A Case Report

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#### **Abstract Type**

Case Report

#### **Introduction**

To report a case report of Goldenhar's Syndrome with Limbal Dermoid cyst.

#### **Case Illustration**

A 13 year old girl complained that there were two lumps in the right eye. The first lump is on the upper temporal part of the inner eyelid and the second lump is on the lower part between the sclera and the cornea of the eye. The lumps was present from birth and gets bigger over time. On ophthalmological examination, visual acuity was 6/60 in right eye and 6/6 in left eye. Examination of the other anterior segments within normal limits and the posterior segments within normal limits. And there are lumps (accessory tragus) on the right and left ears. Another examination is the thoracal-spine within normal limits.

#### **Discussion**

The mass in the pinkish-yellow supero-temporal area was 18 mm x 11 mm in size and the mass that covered between the conjunctiva and cornea was 10 mm x 8 mm in size, well defined, soft consistency, immobile and painless. Management of this patient, excision of the tumor and histopathological examination. Excision of the limbal dermoid tissue in this patient was done partially so that there was still adipose tissue left in the superotemporal and cornea area. The histopathological results in this patient showed mature cystic teratoma.

#### **Conclusion**

In mild cases of Goldenhar syndrome, the patient will only have minor abnormalities in the outer ear such as cartilage or pieces of skin on the ear, which are combined with an eye disorder in the form of a limbal dermoid.

#### **Keyword**

Goldenhar Syndrome, Limbal Dermoid Cyst, Accessory Tragus.

#### **Category**

E-Poster

#### **Latest Update**

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#### **Status**

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## Epos-KBR-09

### Implantation Capsular Tension Ring and Phacoemulsification on Cataract with Pseudoexfoliation Syndrome

#### Abstract Title

Implantation Capsular Tension Ring and Phacoemulsification on Cataract with Pseudoexfoliation Syndrome

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#### Abstract Type

Case Report

#### Introduction

Pseudoexfoliation syndrome (PEX) is characterized by the deposition of a distinctive fibrillar extracellular material in the anterior segment of the eye that can lead to zonular fiber weakness and lens subluxation. Cataract surgery and capsular tension ring (CTR) implantation can be done in this case

#### Case Illustration

A 80 year-old female complained blurred vision on his left eye since 6 month ago. There was no red eye complain and any pain. History of blindness on right eye since 1 year ago. She had hypertension on medication since 5 years ago. Visual acuity on the right eye was no light perception and on the left eye was 0.125 pinhole not improve (PHNI). Intra ocular pressure of right eye was 41 mmHg and left eye 14 mmHg. Anterior chamber depth on both eyes with ciliaris body seen on gonioscopy at four quadrant. Lens on right eye NO5NC4 and left eye NO4NC4. The left eye was treated phacoemulsification + CTR + Intra Ocular Lens (IOL). Post operative visual acuity was 0.4 PH 0.63 and intraocular pressure was 18 mmHg

#### Discussion

Pseudoexfoliation syndrome can lead to open-angle glaucoma and cataract. In this case, the right eye was treated late. On the both eyes material PEX was founded in margin pupil, lens and zonula fiber that can lead to phacodonesis. Surgery was done in left eye by doing phacoemulsification with CTR to make lens stable and avoid complication

#### Conclusion

Capsular tension ring during phacoemulsification on cataract with pseudoexfoliation syndrome can reduce complication and provide a good outcome

#### Keyword

Capsular Tension Ring, Cataract, Phacoemulsification, Pseudoexfoliation Syndrome

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

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## Epos-KBR-10

### Double Intraocular Lenses Implantation in Extremely High Myopia: A Case Report

#### Abstract Title

Double Intraocular Lenses Implantation in Extremely High Myopia: A Case Report

#### First Author

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Annisa Bakri (Sabang Merauke Eye Center (SMEC))

#### Abstract Type

Case Report

#### Introduction

Cataract surgery in high myopia can be challenging for several reasons. Moreover, in rare cases with extremely high myopia, the Intraocular Lens (IOL) power can be extreme and mostly unavailable in some manufacturers. We can apply the primary piggyback method in high myopia that requires very low IOL power.

#### Case Illustration

A fifty-six-year-old woman presented with blurred vision in both eyes. On ocular examination, Uncorrected Visual Acuity (UCVA) in both eyes with finger test 0.5/60, Best Corrected Visual Acuity (BCVA) 20/400 with correction -31.0 Diopter (D). On slit-lamp examination, nuclear cataracts were seen— intraocular pressure (IOP) were within the normal limit on both eyes; 14 mmHg. Barrett Universal II formula emmetropia target was -9.5 D in the right eye and -6.0 in the left eye. The patient underwent cataract extraction surgery with phacoemulsification and piggyback technique. Opfold MFR6125 IOL -5.0D was implanted in the bag and -4.0D in the sulcus. Postoperative results was UCVA 20/60f with IOP 13 mmHg, one week later UCVA 20/50f, and the IOP 12 mmHg. A month later, UCVA 20/50 and BCVA 20/40 with C-1.00 x 80 corrections.

#### Discussion

In evaluating patients preoperatively, a detailed past ocular history is essential. The choice of lens formula, IOL options, and routine examination will affect their final prognosis and avoid complications.

#### Conclusion

Primary piggyback IOL can be implanted in extremely high myopia.

#### Keyword

Double Intraocular Lens; High Myopia; Cataract

#### Category

E-Poster

#### Latest Update

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## Epos-KBR-11

### Phototherapeutic Keratectomy for Granular Corneal Dystrophy Type I: A Case Report

#### Abstract Title

Phototherapeutic Keratectomy for Granular Corneal Dystrophy Type I: A Case Report

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#### Abstract Type

Case Report

#### Introduction

Corneal dystrophies are described as inherited, bilateral, symmetrical and progressive corneal diseases without relationship to environmental or systemic factors. Granular corneal dystrophy type I is caused by a mutation in the transforming growth factor beta-induced gene (TGFB1) gene on the 5q31 chromosome leading to a production of keratoepithelin protein. Phototherapeutic keratectomy (PTK) is a safe procedure for anterior corneal pathologies including corneal dystrophy.

#### Case Illustration

A 50-year-old man complained of decreased vision in both eyes with photophobia and a history of corneal dystrophy. Family history demonstrated the existence of relatives presenting the same corneal problems. His visual acuity was 1/60 in both eyes with normal intraocular pressure (IOP). Slit lamp biomicroscopy revealed bilateral multiple round and elongated, sharply demarcated white-greyish granular deposits in the corneal stroma. Nuclear cataract was found in the lens. Anterior optical coherence tomography displayed hyperreflective granules in the stroma. The patient underwent cataract extraction with phacoemulsification followed by superficial keratectomy. Excimer laser PTK with mitomycin C was performed in the following visit and increased visual acuity was reported.

#### Discussion

PTK can be an alternative treatment option to keratoplasty for granular corneal dystrophies in areas where tissue donors are not readily available. PTK offers several advantages including faster recovery time, repeatability and less invasive than keratoplasty.

#### Conclusion

Phototherapeutic keratectomy is an effective option for treatment of granular corneal dystrophy type I.

#### Keyword

corneal dystrophy, granular dystrophy, phototherapeutic keratectomy

#### Category

E-Poster

#### Latest Update

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## Epos-KBR-12

### COMBINED SURGERY OF PENETRATING KERATOPLASTY AND SIEPSE SLIDING TECHNIQUE PUPILLOPLASTY ; A CASE REPORT

#### Abstract Title

COMBINED SURGERY OF PENETRATING KERATOPLASTY AND SIEPSE SLIDING TECHNIQUE PUPILLOPLASTY ; A CASE REPORT

#### First Author

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#### Author Institution

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#### Abstract Type

Case Report

#### Introduction

Penetrating Keratoplasty (PK) has been the standard of care for treating corneal ulcer for many years. The aim of this combine surgery techniques PK and pupilloplasty is to restored the shallow anterior chamber (VH1) and iris retracted to site of central corneal perforation, lowering risk of graft failure, pupil cosmetics.

#### Case Illustration

Female, 32 yo came with bacterial perforated ulcer on central corneal with iris retracted to site of perforation and shallow anterior chamber (VH1). Patient was treated with combines surgery of cataract extraction without IOL implantation, PK and Siepser sliding slipknot suture technique to reform the shallow anterior chamber (VH1), and release the pinched synechia. One week after procedure there was no synechia reported, deep anterior chamber, corneal integrity was regained and no sign of graft failure.

#### Discussion

The condition of the anterior chamber and anterior synechia was restored by PK and pupilloplasty technique. The modification of Siepser sliding slipknot suture technique and PK is an important approach to release anterior synechia and restoring integrity to the anterior chamber, in accordance with previous study by Cohen reported that in most patients there was no progression of synechia postoperatively. This case still need continues monitoring until one year to evaluate the anterior chamber, anterior synechia and sign of graft failure

#### Conclusion

Combine surgery of PK and pupilloplasty was an effective technique to restored the anterior chamber, and lowering risk of graft failure. Continues monitoring were strongly recommended to observe the condition of anterior chamber and sign of graft rejection

#### Keyword

Penetrating Keratoplasty, Pupilloplasty, Corneal Ulcer

#### Category

E-Poster

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August 16, 2020

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## Epos-KBR-13

### Successful Case of Limbal Relaxing Incision with Compression Suture in Surgical Induced High Astigmatism

#### Abstract Title

Successful Case of Limbal Relaxing Incision with Compression Suture in Surgical Induced High Astigmatism

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#### Abstract Type

Case Report

#### Introduction

To present a case of surgical induced high astigmatism and its successful management with combination of limbal relaxing incision and compression suture.

#### Case Illustration

A 70 year-old woman presented with discomfort on her right eye after she underwent cataract surgery 6 months ago in the previous hospital. From the examinations, the uncorrected visual acuity (UCVA) was 2/60 and with correction of S+2.50 C-8.00x100 the best corrected visual acuity (BCVA) reached 6/15. On the cornea, there were 2 nylon sutures at the superotemporal and scarring at the inferotemporal. The keratometry readings were 47.10x12o for horizontal meridian and 40.70x102o for vertical meridian. We diagnosed the patient with surgical induced astigmatism (SIA). We created paired Limbal Relaxing Incisions (LRIs) on 1 mm anterior from limbus and placed one compression suture on the patient's flat axis. One month later, the UCVA became 6/12 and the BCVA reached 6/9 with correction of C-1.50x90o with the keratometry readings became 41.10x158o for horizontal meridian and 40.60x102o for vertical meridian.

#### Discussion

Corneal incisions changed curvature creating coupling effect. In this case, the corneal scarring created suspicion of longer incisions and previously removed suture that contributed to SIA. Previous studies have reported greater astigmatism could be reduced with combinations of relaxing incisions and compression sutures. The LRIs were also made more anteriorly to prevent under correction.

#### Conclusion

LRI is a simple procedure that works well in moderate astigmatism, however in the case of high astigmatism, we could enhance the effect of the LRIs by making the incisions more anteriorly and placing compression suture.

#### Keyword

compression suture, limbal relaxing incision, surgical induced astigmatism

#### Category

E-Poster

#### Latest Update

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## Epos-KBR-14

### GLISTENING INTRAOCULAR LENS : A CASE REPORT

#### Abstract Title

GLISTENING INTRAOCULAR LENS : A CASE REPORT

#### First Author

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Glistenings are fluid filled microvacuoles that form within an Intraocular Lens (IOL) optic when the IOL is in an aqueous environment. The phenomenon of glistening has been reported commonly in hydrophobic acrylic IOLs. Factors that have been consistently associated with glistening formations are changes in temperature, IOL manufacturing and packaging techniques or the systemic condition like Diabetes Mellitus

#### Case Illustration

Case Report. A 58 year old man presenting hazy and decrease of vision 1 year in oculi dextra after cataract extraction and posterior chamber IOL implantation. By using slitlamp, fluid filled opacities were seen.

#### Discussion

Glistenings are a relatively common phenomenon, especially in patients with hydrophobic acrylic IOLs. Currently, glistening often misdiagnosed as a posterior capsular opacities. Appropriate evaluations of visual function in such patients are needed and consideration should be given to IOL exchange in symptomatic patients. Further long-term studies are necessary to assess potential effects of glistenings on patients' visual function and the exact risk factor of glistening IOL related systemic condition like Diabetes Mellitus.

#### Conclusion

Further long-term studies are necessary to assess potential effects of glistenings on patients' visual function and the exact risk factor of glistening IOL related systemic condition like Diabetes Mellitus. In the meantime, there are promising new generations of hydrophobic acrylic IOL materials that may provide a glistening-free IOL.

#### Keyword

Glistening, hydrophobic, IOL

#### Category

E-Poster

#### Latest Update

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## Epos-KBR-15

### Limbal Relaxing Incisions For Managing Corneal Astigmatism During Phacoemulsification

#### Abstract Title

Limbal Relaxing Incisions For Managing Corneal Astigmatism During Phacoemulsification

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#### Abstract Type

Case Report

#### Introduction

Limbal relaxing incisions (LRIs) are one of the simplest and most cost-effective procedures available to reduce astigmatism.

#### Case Illustration

There are three cases with preoperative corneal astigmatism values less than 1.50 D and the location of the LRIs were calculated with Ircalculator application. Biometry and keratometry values were calculated with IOL Master 500. A 600 micron pop up micrometer blade is used for performing LRIs. DONO normogram was used in all cases with 190o for the surgical incision location on the right eye and 10o for the left eye. First case (female, 42 yo) with preoperation uncorrected visual acuity (UCVA) 1/60 and corneal astigmatism at 0.52 D @540 with LRIs location @1290 and 500 long, which resulting 0.18 D with UCVA 6/9 at 1 month postoperation. Second case (female, 70 yo) with preoperation UCVA 6/24 and corneal astigmatism at 1.32 D @860 with LRIs location @1720 and 700 long, resulting 0.70 D with UCVA 6/6 1 month postoperation. Last case (Female, 70 yo) with preoperation UCVA 6/30 at 1.28 D @970 corneal astigmatism with LRIs location @60 and 700 long, resulting 0.69 D with UCVA 6/15 at 1 month postop.

#### Discussion

Management of corneal astigmatism in cataract surgery is a well-studied problem. Techniques for correction are available, one of which is LRIs.

#### Conclusion

Limbal relaxing incisions can manage the corneal astigmatism and more effective on eye with low to moderate, rather than high astigmatism. It is a safe, cost-efficient procedure with low risk of complications and can be performed with ease.

#### Keyword

Limbal Relaxing Incisions, Corneal Astigmatism, Phacoemulsification

#### Category

E-Poster

#### Latest Update

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## Epos-KBR-16

### Challenging Management of Juvenile Cataract with Iris Coloboma and Nystagmus in Adult: A Case Report

#### Abstract Title

Challenging Management of Juvenile Cataract with Iris Coloboma and Nystagmus in Adult: A Case Report

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#### Abstract Type

Case Report

#### Introduction

Bilateral cataracts are extremely rare and almost noticed and removed by lately. Cataract surgery with iris coloboma can present intraoperative challenges and posse greater risk of complication because of the associated ocular malformations.

#### Case Illustration

A 33-years-old woman patient came to the outpatient clinic with blurred vision such like seeing a fog in both eyes within 2 years. None history of redness in the both eyes. Ophthalmology examination were hand movement visual acuity on the left eye with normal limit of IOP, and 4/60 visual acuity on the right eye with normal limit of IOP. Anterior segment examination were lens opacities with iris coloboma and nystagmus for both eyes, and no sign of inflammation. Corneal size vertical dan horizontal was 10 mm. According to ultrasound imaging and biometry there were vitreous echo free and retina on placed, 22.28 mm on axial length measurement, IOL foldable power 22.07 dioptr. Phacoemulsification and IOL foldable implantation was performed under general anaesthesia. Post-operative treatment patient had treatment levofloxacin eye drop and fluorometholone eye drop. Post-operative surgery, visual acuity had improved to 3 meters finger counting with Descemet fold in corneal and IOP within normal limit.

#### Discussion

The treatment of bilateral juvenile cataract posses problems such as the selection of operable age, surgical technique and rehabilitation, whether to operate the both eyes or in separate session. Simultaneous cataract surgery is preferable because of highly anesthesiologic risk in patient and deprivation of amblyopia.

#### Conclusion

Simultaneous cataract surgery give the best result for bilateral juvenile cataract with nystagmus and iris coloboma

#### Keyword

bilateral juvenile cataract, iris coloboma, nystagmus, adult

#### Category

E-Poster

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## Epos-KBR-17 TRAUMATIC CATARACT

**Abstract Title**  
TRAUMATIC CATARACT

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**Abstract Type**  
Case Report

**Introduction**  
To report a case of traumatic cataract

**Case Illustration**  
Patient came with the chief complaint of blurry vision on the right eye since approximately 7 weeks before admission. The RE was injured by three-inch nail then treated previously. On current examination, VOD was 1/~ without pinhole improvement. A vertical leucoma in the central cornea was found with length 2.5mm. A corneal cicatrix was found but the cornea remained intact. There was a lens particle attached to iris found in the medium level of anterior camera oculi, showing a penetrated injury that had caused anterior capsule rupture. The pupil was ellipse in shape with posterior synechia on the inferonasal portion. The lens was opaque and the fundus reflex was negative. From USG examination, posterior capsule and RCS was intact and vitreal body was echo lucent.

**Discussion**  
Based on the anamnesis and physical examination, patient was diagnosed with traumatic cataract. The history of injury on the RE due to three-inch nail, the decreased vision, opacity of the right lens, and lens particle found in anterior camera oculi, supported the diagnosis of traumatic cataract. The RE was later undergone cataract extraction surgery using low parameter phacoemulsification. Postoperatively, the RE was given topical antibiotic and steroid. There was no complication reported after surgery. For weeks after the operation, the RE visual acuity was increased to 6/9.

**Conclusion**  
The proper treatment and surgery of traumatic cataract may result in outstanding improvement of visual acuity.

**Keyword**  
Traumatic cataract, Phacoemulsification, visual acuity

**Category**  
E-Poster

**Latest Update**  
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## Epos-KBR-18 HAZARDOUS CHEMICAL SUBSTANCE CAUSE SEVERE OCULAR INJURY : A Case Report

**Abstract Title**  
HAZARDOUS CHEMICAL SUBSTANCE CAUSE SEVERE OCULAR INJURY : A Case Report

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**Abstract Type**  
Case Report

**Introduction**  
Chemical (alkali and acid) injury of the conjunctiva and cornea is an ocular emergency and requires immediate evaluation and management because can produce extensive damage to the ocular surface and anterior segment leading to visual impairment and disfigurement.

**Case Illustration**  
A 57-year-old male referred to our clinic 2 days after bilateral chemical burn (sulfuric acid) on his eyes and upper face while working. He complains pain, severe eyelid swelling, blepharospasm, epiphora, burning, foreign body sensation. Ocular PH upon arrival was 5 OD and 6 OS and further irrigation was performed until the PH is on appropriate range 7. Vision were 1/60 OD and PL OS. Macroscopic examination revealed whitening on conjunctiva, perilimbal ischaemia and loss of conjunctival epithelium, corneal opacity and obscuration of iris detail of both eye. Patient was diagnosed with burn and corrosion of eyes. After irrigation patient was treated with oral antibiotics and vitamin C, topical cycloplegic, artificial tears, and steroid. 1 week after therapy, his visual acuities has slightly improved to 2/60 OD and HM OS.

**Discussion**  
Early irrigation is critical in limiting the duration of chemical exposure. The goal is to remove the offending substance and restore the physiologic PH.

**Conclusion**  
The final visual prognosis is influenced by the nature of the chemical insult, the extent of ocular damage, and the timing and efficacy of treatment.. Early recognition and treatment of ocular chemical injury ensure the best possible outcome for this potentially blinding condition.

**Keyword**  
Ocular chemical injuries, hazardous chemical substances.

**Category**  
E-Poster

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## Epos-KBR-19

### PENETRATING OCULAR TRAUMA AFTER A FIGHT – A CASE REPORT

#### Abstract Title

PENETRATING OCULAR TRAUMA AFTER A FIGHT – A CASE REPORT

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Globe injuries, a component of ophthalmic trauma, are a serious and preventable cause of monocular blindness typically affecting children and young adults. This case report outlines the ocular trauma management in emergency department and referral to ophthalmologist.

#### Case Illustration

A 35-year-old male presented to our Emergency Department with chief complaint of blurred and pain to his left eye (LE) after a fight with his neighbor. He was struck by a fist and his eyeglasses was broken. The patient has high myopia (for both eyes). Initial uncorrected visual acuity (UCVA) of light perceptions (LP) with wrong projections on the LE. From external eye examination: mild corneal edema, shallow anterior chamber, the pupil was irregular and drawn towards the wound due to iris dialysis and prolapse. We found a C-shaped corneal rupture at 7-11 o'clock and opacity of the lens. Fundus details were not clear due to vitreous hemorrhage and retinal detachment suspected. An ophthalmology consultation was obtained. He was taken to the operating room and corneal rupture was repaired. One month after first surgery, phacoemulsification and iridoplasty were performed. One year after the surgeries, his UCVA was 1/60.

#### Discussion

Penetrating injuries usually require surgery and have poor prognosis resulting in long term visual impairment. A visual acuity testing and a careful external eye examination of the ocular trauma should be performed. Referral or consult to the ophthalmologist is mandatory.

#### Conclusion

A prompt recognition of ocular trauma types, treatment plan, and referral or consult to the ophthalmologist are mandatory in emergency setting.

#### Keyword

Ocula

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Approved As E-Poster

## Epos-KBR-20

### HEALED-CORNEA AFTER STRONG-BASE ALKALI INJURY OF EYE : A CHALLENGING TRUE OPHTHALMIC EMERGENCY MANAGEMENT

#### Abstract Title

HEALED-CORNEA AFTER STRONG-BASE ALKALI INJURY OF EYE : A CHALLENGING TRUE OPHTHALMIC EMERGENCY MANAGEMENT

#### First Author

Andreas Surya Anugrah MD

#### Author Institution

Mandaya Hospital

#### Co Author

#### Abstract Type

Case Report

#### Introduction

Chemical injuries to the eye is one of the true ophthalmic emergencies and truly critical. Alkali injuries are more common and can be more clinically challenging, with a significant potential for long-term morbidity.

#### Case Illustration

A 43 years old man, presented to Mandaya Hospital Karawang emergency unit after sodium hydroxide entered his left eye. With an epithelial defect of the bulbar and palpebral conjunctiva, ischemia of the inferior third of the limbal conjunctiva, a total corneal epithelial defect and mild corneal stromal opacity, the damage was determined as Roper-Hall grade III with visual acuity was 3 metres. Eye was immediately washed out with 1,000 ml of physiological saline after initial examination until the alkalic condition neutralized. Topical antibiotics, steroids, cycloplegic, lubricating eyedrops, oral ascorbic acids and analgetics were administered for one week. After two weeks, topical steroid tapered down. After two months follow up, cornea epithelium healed with improved visual acuity to 20/25 without any discomfort, in spite of slight haziness on the inferior limbal.

#### Discussion

Initial treatment of chemical burn should begin immediately by irrigating the ocular surface until the pH is normal. The fact that the proliferation of epithelial cells and healing proceeded smoothly indicates that it did not have an adverse effect on wound healing in the present case

#### Conclusion

Alkali injuries are clinically challenging, significant potential for long-term morbidity. Immediate, prolonged irrigation, followed by aggressive early management and close long-term monitoring, is essential to promote ocular surface healing and to provide the best opportunity for visual rehabilitation.

#### Keyword

Corneal injury, chemical eye trauma, alkaline burns

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Approved As E-Poster

## Epos-KBR-21

### Anterior Chamber Depth Comparison Among Group of Age in Patients Undergo Phacoemulsification Cataract Surgery

#### Abstract Title

Anterior Chamber Depth Comparison Among Group of Age in Patients Undergo Phacoemulsification Cataract Surgery

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#### Abstract Type

Research

#### Introduction & Objective

Anterior chamber depth (ACD) is defined as the distance of corneal and anterior surface of the lens. Clinically, ACD also plays an important preoperative role for intraocular surgery. This study aimed to analyze the role of age on ACD.

#### Method

This was a cross-sectional retrospective study based on cataract surgery data from 2015 – 2018. The data collected from medical records at PHC Hospital, Surabaya. Total of 1298 pre-operative cataract patients medical records were examined. The baseline data such as age, sex and ACD were retrieved. Patients with any other ophthalmology conditions were excluded from this study.

#### Result

The data were analyzed using statistical analysis. The mean  $\pm$  standard deviation of age and ACD were  $63.5 \pm 9.52$  (range 45-75) and  $3.97 \pm 0.7$ . A Kruskal Wallis comparison analysis showed that between five group of age, there were a significance difference in ACD mean. A Post Hoc Mann Whitney U-Test analysis were conducted and showed there were a significance difference in ACD between 46-55 years old with 56-65 years old group of age ( $p < 0.001$ ), 46-55 with 66-75 years old group of age ( $p < 0.000$ ) and 46-55 years old with  $\geq 76$  years old group of age ( $p < 0.000$ ).

#### Conclusion

According to this study, there were there were a significant difference in ACD between group of age. Significance difference were found between 46-55 years with the older group. Older group of age showed shallower ACD. Further study need to be conducted to evaluate the role of age on ACD.

#### Keyword

cataract, anterior chamber depth, group of age

#### Category

E-Poster

#### Latest Update

August 11, 2020

#### Status

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## Epos-KBR-22

### Association between Age, Gender, Smoking Status, Glasses Wearing and Hat Wearing with Pterygium Incidence in Prof.Dr.W.Z. Johannes Kupang Hospital, East Nusa Tenggara

#### Abstract Title

Association between Age, Gender, Smoking Status, Glasses Wearing and Hat Wearing with Pterygium Incidence in Prof.Dr.W.Z. Johannes Kupang Hospital, East Nusa Tenggara

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#### Abstract Type

Research

#### Introduction & Objective

Pterygium has been a significant and common external eye disease associated with chronic sun and multiple air pollutant exposure. However there is insufficient information on pterygium incidence and its contributing factors in Kupang, East Nusa Tenggara, especially related to East Nusa Tenggara's geographic and demographic data differences. The purpose of this study was to know association between age, gender, smoking Status, glasses wearing and hat wearing with pterygium in Prof.Dr.W.Z Johannes Kupang Hospital, East Nusa Tenggara.

#### Method

This study was case-control in design with the secondary data obtained from the patient with pterygium and without pterygium (as a control group) who came to ophthalmologist outpatient clinic of Prof.Dr.W.Z Johannes Kupang Hospital, East Nusa Tenggara in Januari 2018 until Januari 2020. Data obtained from medical records were: age, gender, smoking Status, glasses wearing Status, hat wearing Status, with/ without pterygium and also pterygium grade. We analyzed 45 patients with pterygium and 45 patients without pterygium.

#### Result

Older age ( $\geq 40$  years old) increased 8.62 folds of pterygium risk significantly ( $p$

#### Conclusion

Older age, smoke exposure and not-wearing-glasses Status increased pterygium incident risk significantly in this study. The risk of pterygium increased in women and not-wearing-hat Status insignificantly.

#### Keyword

pterygium; smoking; glasses

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-KBR-23

### FAMILIAL PHENOTYPIC SPECTRUM OF REIS-BUCKLERS CORNEAL DYSTROPHY: A RARE CASE

#### Abstract Title

FAMILIAL PHENOTYPIC SPECTRUM OF REIS-BUCKLERS CORNEAL DYSTROPHY: A RARE CASE

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#### Abstract Type

Case Report

#### Introduction

Reis-Bücklers corneal dystrophy (RCBD) is a rare, bilateral and autosomal dominant inherited disease that primarily affects superficial corneal layers. It is generally accepted that a mutated TGF-1 induced protein accumulated in this type of dystrophy, but the exact pathophysiological mechanism remains unrevealed.

#### Case Illustration

Thirty six year old Indonesian male with a complaint of white patches on the cornea in both eyes, accompanied with foreign body sensation, and blurred vision since young age. At that time of examination, the best corrected visual acuity was 1/60 (OD) and hand movement (OS). Slit-lamp examination of both eyes revealed geographic opacification on central cornea for both eyes. The same characteristics also found in his siblings, as well as his child. There were various phenotypes severity for each patient based on age of onset. All cases were diagnosed with RCBD.

#### Discussion

RCBD diagnosed by its typical clinical features, its unique opacities affect the bowman's layer and superficial corneal stroma.

#### Conclusion

We reported rare cases of an Indonesian family with typical phenotype trait of RCBD inherited by autosomal dominant, with the specific clinical appearance were opacities that reach the bowman's and some stromal layer of the cornea that tend to worsen by aging and normal endothelial cell density on microscopic specular. The dystrophic corneas were thicker than normal, the value of pediatric patient corneal thickness less than the adults.

#### Keyword

corneal dystrophies, reis bückler, Indonesian family

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

Submitted

## Epos-KBR-24

### Graft Failure After Penetrating Keratoplasty : A Case Report

#### Abstract Title

Graft Failure After Penetrating Keratoplasty : A Case Report

#### First Author

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#### Abstract Type

Case Report

#### Introduction

Penetrating Keratoplasty is a procedure consisting of full-thickness replacement of the cornea. Graft failure is defined as cornea edema that never clears from the immediate postoperative period secondary to inherent deficiencies in the donor graft, surgical trauma, or improperly stored tissue

#### Case Illustration

Male, 83 yo came with cornea perforation on his left eye. The visual acuity LPBP, flat anterior chamber and iris retracted to site of perforation. Patient later diagnosed as epithelialized cornea perforation on his left eye. Patient complain with the same problem since a month ago before go to Sanglah. Two months after PK, this patient diagnosed as graft failure on left eye with persistant epithelial defect (hazy cornea) and flat anterior chamber.

#### Discussion

In this case, graft did not clear within 2 weeks of transplantation were considered primary donor failure. The graft was hazy with flat anterior chamber, which can directly damage the endothelium of the graft and also significant risk factor for graft failure. In accordance of previous study Price et al ; flat anterior chamber is most strongly associated with overall graft failure.

#### Conclusion

Graft failure is one of the complication after PK, flat anterior chamber is most strongly associated with overall graft failure. Compliance to systemic therapy and close follow up were highly suggested to prevent the graft failure. Particularly important to anticipate and prevent failure of initial grafts, because regrafts have a much poorer prognosis.

#### Keyword

Penetrating keratoplasty, Graft Failure, Anterior Synechiae, Flat Anterior Chamber

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Approved As E-Poster

## Epos-OFKOM-01

### Outpatient Characteristic In Eye Clinic At Mangusada Hospital in 2019

#### Abstract Title

Outpatient Characteristic In Eye Clinic At Mangusada Hospital in 2019

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#### Abstract Type

Research

#### Introduction & Objective

Visual impairment and blindness are serious health problem in Indonesia, and according to survey, cataract was the main cause of blindness. Vision 2020 : The Right To Sight is the global initiative for the elimination of avoidable blindness in 2020. Hospital has been in the front line to achieve Vision 2020, mainly in providing data on cause of blindness.

#### Method

This study was a descriptive study done in Eye Clinic at Mangusada Hospital. The method of the study was using survey method with secondary data which was medical record. Inclusion criteria was recorded as outpatient in Eye Clinic at Mangusada Hospital in 2019. Exclusion criteria was medical record that was not complete or damaged. Data analysis was processed with computerised method and presented in graphics.

#### Result

The study with total sample of 10,177 samples showed that most of outpatient in Eye Clinic at Mangusada Hospital were diagnosed with Senile Incipient Cataract (H250) as much as 2,246 patients, female patients made the most visit with 5,291 visits, most of the patient were in 60 - 69 years age group with total of 2,936 patients, and 9,645 of all the patients were established patient.

#### Conclusion

Senile Insipient Cataract was the most diagnosed disease in Eye Clinic at Mangusada Hospital in 2019. Female patient visits outnumbered male patient visits. Age group 60 - 69 years old made the most visits. Established patients contributed in most of the visit.

#### Keyword

vision 2020, cataract, outpatient

#### Category

E-Poster

#### Latest Update

August 06, 2020

#### Status

Submitted

## Epos-OFKOM-02

### PROFILE OF ELDERLY WHO WERE SCREENED FOR MATURE SENILE CATARACTS AND THE PREVALENCE OF MATURE SENILE CATARACTS IN ULIAN VILLAGE, KINTAMANI DISTRICT, BANGLI REGENCY

#### Abstract Title

PROFILE OF ELDERLY WHO WERE SCREENED FOR MATURE SENILE CATARACTS AND THE PREVALENCE OF MATURE SENILE CATARACTS IN ULIAN VILLAGE, KINTAMANI DISTRICT, BANGLI REGENCY

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#### Abstract Type

Research

#### Introduction & Objective

Cataract is one of the causes of decreased vision in elderly, and is a leading cause of blindness in the world. The aim of this study is to determine the characteristics of elderly screened for mature senile cataract and the prevalence of mature senile cataract in Ulian Village, Kintamani District, Bangli Regency.

#### Method

This study was designed as cross-sectional descriptive study using a total sampling technique. A total of 46 elderly who had never been diagnosed with mature senile cataract, and who were registered in the Ulian Village Auxiliary Health Care in 2018 were chosen to be the population screened for this study. The data were obtained by interviewing the respondents and doing visual examinations. Respondents were directed to take a look at the tumbling Snellen E chart. The visual acuity of 6/60 or less in one or both eyes along with the presence of clouding in the lens were qualified as mature senile cataract.

#### Result

The characteristics of elderly screened for mature senile cataract were male (43.47%) and female (56.52%). The elderly, old and very old groups were 73.91%, 19.56%, and 4.34%, respectively. Most of the elderly (39.13%) completed junior high school. Most of the elderly (65.21%) were farmers. Three out of 46 elderly were diagnosed with mature senile cataract. The prevalence of mature senile cataract was 6.52%.

#### Conclusion

The purposes of cataract screening in the elderly were to determine visual acuity, to achieve a better life quality by correcting visual acuity, and to be referred to the advanced health care facilities.

#### Keyword

Profile of elderly; the prevalence of mature senile cataract

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Approved As E-Poster

## Epos-VR-01

### The Importance of Internal Limiting Membrane Peeling in Epiretinal Membrane: A Case Report

#### Abstract Title

The Importance of Internal Limiting Membrane Peeling in Epiretinal Membrane: A Case Report

#### First Author

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#### Abstract Type

Case Report

#### Introduction

There have been ongoing controversies regarding surgical approach in epiretinal membrane (ERM). Several studies showed that internal limiting membrane (ILM) peeling causes mechanical and functional damage of the retina, which are related to peripheral visual defects and unsatisfactory post-operative visual recovery. We presented a case of idiopathic ERM treated with vitrectomy and ILM peeling, with improved functional and anatomical outcome.

#### Case Illustration

A 65-year-old-man came with a chief complaint of blurred vision on the right eye. Physical examination and OCT revealed ERM on the right eye with visual acuity (VA) of 6/24. A primary 6 months conservative treatment was performed, however complaint persisted and no spontaneous separation of the ERM was observed. ILM peeling following vitrectomy was completed, and the membrane was successfully removed. One week post-surgery, VA improved to 6/20. After three months, macular thickness reduced to 431  $\mu\text{m}$  and continued to decrease to 385  $\mu\text{m}$  in 6-month evaluation. VA was stabilized in 6/20 in 3-month and 6-month evaluation.

#### Discussion

Conservative treatment with spontaneous epiretinal membrane separation found in several cases although this is a rare event. Vitrectomy with ILM peeling was decided later because of the persistence of main complaint. Improvement of VA, reduction of macular thickness achieved, and no adverse effect observed.

#### Conclusion

Surgical approach should be considered in ERM cases with no spontaneous membrane separation during 6 month-observation period. ILM peeling following a vitrectomy shown an improved final VA and a reduced central macular thickness in ERM. ILM peeling should also be considered regarding its benefit of reducing ERM recurrence

#### Keyword

epiretinal membrane, internal limiting membrane peeling, vitrectomy

#### Category

E-Poster

#### Latest Update

July 18, 2020

#### Status

Submitted

## Epos-VR-02

### Concomittant Lupus Choroidopathy and Optic Neuropathy : A Rare Ocular Manifestation of Systemic Lupus Erythematosus

#### Abstract Title

Concomittant Lupus Choroidopathy and Optic Neuropathy : A Rare Ocular Manifestation of Systemic Lupus Erythematosus

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#### Abstract Type

Case Report

#### Introduction

Systemic lupus erythematosus (SLE) is a chronic, autoimmune connective tissue disorder of multiple organ including the eye. Ocular manifestations associated with severe systemic inflammation and can be a marker for systemic prognosis. It is important for ophthalmologists to be aware, detect and treat ocular

#### Case Illustration

An 18 years old female patient complained of sudden blurring of vision. She had been diagnosed with SLE since 1.5 years ago but poorly compliant with medication. She had been discharged from other hospital due to anemia, lupus nephritis, hypertension, pneumonitis, esophageal ulcer, gastritis and hypoalbuminemia. Visual acuity both eyes were counting fingers with normal intraocular pressure. Posterior segment in both eyes showed blurring margin of optic disc, massive exudative retinal detachment and choroidal detachment involving the macula. Optical Coherence Tomography (OCT) showed subretinal fluid in both macula, and thickening retinal nerve fiber layer of optic disc. We diagnosed the patient with Lupus choroidopathy and optic neuropathy. We treated the patient with oral steroid (methylprednisolone 1mg/kgbb/day) tapered off each week. After one month, there was complete resolution of choroidal/retinal exudation and improved visual acuity.

#### Discussion

In our case, poor compliance to SLE therapy resulted in choroidopathy and optic neuropathy. The pathogenesis may be due to choroidal vascular occlusion secondary to deposition of antibody-antigen complexes in the vascular wall. Hypertension also worsens the vascular condition by promoting vascular occlusion. Additional immunosuppressive agent (such as steroids) showed good control of inflammation and normalization of visual acuity.

#### Conclusion

Steroids as additional immunosuppressive agent showed improved visual acuity and resolved choroidopathy/optic neuropathy

#### Keyword

Systemic Lupus Erythematosus, Ocular SLE, Lupus Choroidopathy, Lupus Optic Neuropathy

#### Category

Free Paper Presentation

#### Latest Update

July 29, 2020

#### Status

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## Epos-VR-04

### ANTI-VEGF INTRAVITREAL INJECTION MONOTHERAPY IN POLYPOIDAL CHOROIDAL VASCULOPATHY: WHEN TO CONSIDER?

#### Abstract Title

ANTI-VEGF INTRAVITREAL INJECTION MONOTHERAPY IN POLYPOIDAL CHOROIDAL VASCULOPATHY: WHEN TO CONSIDER?

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#### Co Author

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#### Abstract Type

Case Report

#### Introduction

Polypoidal Choroidal Vasculopathy (PCV) is particularly prevalent in Asian populations.<sup>1</sup> The increased expression of VEGF in the aqueous humor of eyes with PCV provides a biologic rationale for treatment with Anti-VEGF agents, but the study regarding which type of PCV can effectively treat by anti-VEGF was still limited

#### Case Illustration

Four cases of PCV was treated with intravitreal Anti-VEGF injection. First (male, 56 yo) and second case (female, 47 yo) present with VA Hand Movement and 1/60 and thickened Retinal Pigment Epithelium (RPE) layer and multiple RPE notch on OCT examination were not showing improvement after injection. Third and fourth case (female, 56 yo and male, 56 yo) with subretinal fluid and large single PED was shown improvement in both foveal structure and visual acuity from 6/60 to 6/21 and 1/60 to 6/12 respectively, after second intravitreal Anti-VEGF injection.

#### Discussion

Four different types of PCV in this case series respond differently to anti-VEGF intravitreal injection. The first and second case has a thickened RPE layer which not responded to Anti-VEGF, a presumed mechanism involved was due to anti-VEGF lack of access in penetrating the RPE, as supported by Gomi et al. In third and fourth case of PCV with subretinal fluid and single PED, Anti-VEGF was shown to respond better, as previously proven by Kokame et al in his recent study.

#### Conclusion

Anti-VEGF was still worth considering in treating PCV with single PED and subretinal fluid type, while the efficacy with thickened RPE layer was not confirmed.

#### Keyword

Polypoidal Choroidal Vasculopathy , Anti-VEGF, Retinal Pigment Epithelium

#### Category

E-Poster

#### Latest Update

August 10, 2020

#### Status

Submitted

## Epos-VR-05

### CHOROIDAL NEOVASCULARIZATION IN A CASE OF CHORIORETINAL COLOBOMA TREATED WITH INTRAVITREAL ANTI-VEGF INJECTONS: A CASE REPORT

#### Abstract Title

CHOROIDAL NEOVASCULARIZATION IN A CASE OF CHORIORETINAL COLOBOMA TREATED WITH INTRAVITREAL ANTI-VEGF INJECTONS: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Chorioretinal coloboma results from abnormal closure of the embryonic fissure. Choroidal neovascularization (CNV) is a rare complication associated with coloboma of the choroid. VEGF plays a very important role in the development of CNV.

#### Case Illustration

A 52-year-old woman with gradual blurred vision of the left eye since 4 months ago. Her right eye vision was already blurred since she was a child. Uncorrected visual acuity of the right eye was 0.5/60. Fundus examination of the right eye showed chorioretinal coloboma. Uncorrected visual acuity of the left eye was 6/20. Her iris of the both eye showed inferior coloboma. Fundus examination of the left eye showed chorioretinal coloboma and macular edema with soft drusen. Macular optical coherence tomography (OCT) confirmed macular subretinal fluid, and indicated a CNV lesion of the left eye. She underwent a loading dose of three monthly intravitreal anti-VEGF injections for the left eye. One month after completion of treatment, uncorrected visual acuity of the left eye improved to 6/12.

#### Discussion

CNV is a complication associated with CRC. Intravitreal Anti-VEGF treatment using loading dose regimen is shown to be effective effective in treating CNV associated with CRC. One month after completion of treatment, uncorrected visual acuity of the left eye improved to 6/12.

#### Conclusion

Chorioretinal coloboma is a rare congenital anomaly of the posterior segment. Choroidal neovascularization is a complication associated with coloboma of the choroid. Treatment with a loading dose of three monthly intravitreal anti-VEGF injections showed good anatomical and functional results.

#### Keyword

Chorioretinal coloboma, choroidal neovascularization, intravitreal Anti-VEGF injections

#### Category

E-Poster

#### Latest Update

August 11, 2020

#### Status

Submitted

## Epos-VR-06

### Bilateral Retinoblastoma - A case report

#### Abstract Title

Bilateral Retinoblastoma - A case report

#### First Author

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#### Co Author

Andrew Chietra (Department of Ophthalmology Faculty of Medicine Sam Ratulangi University)

Anne Umboh (Department of Ophthalmology Faculty of Medicine Sam Ratulangi University)

#### Abstract Type

Case Report

#### Introduction

Retinoblastoma is an intraocular malignancy with primitive neuroendocrine origins that primarily affects young children.

#### Case Illustration

A 1-year-11-month-old boy was referred to hospital with complaint of approximately four months history of white plaque in both eyes. It was initially occurred as a small white plaque, with progressive protrusion and swollen in both eyes. Family history for retinoblastoma was negative. General examination is within normal limits. On ophthalmic examination, slight proptosis is noted in both eyes with eyeball and cornea appearing relatively enlarged. Visual acuity on both eyes was no light perception. Computed tomographic scan and ultrasound scan showed bilateral retinoblastoma imaging. The patient was consulted to pediatric health division for chemotherapy and then planned for surgery.

#### Discussion

Retinoblastoma arises as malignant proliferation of the immature retinal neural cells called retinoblast. Leukocoria and strabismus are the two most common presentations in younger children. The patient in this case is specific for these ophthalmic signs. For bilateral retinoblastoma, chemoreduction plus thermotherapy or cryotherapy is necessary in most cases and approximately 60 % of patients require enucleation of one eye for a dangerously advanced tumor. In this case, the tumor is large and there is poor vision. So, an indication of enucleation is necessary.

#### Conclusion

Bilateral retinoblastoma should be taken care earlier. The treatment of choice is combine surgery and chemo/radiation therapy, and the prognosis is poor.

#### Keyword

Retinoblastoma, bilateral, ultrasound, computed tomography

#### Category

E-Poster

#### Latest Update

August 13, 2020

#### Status

Submitted

## Epos-VR-07

### A CASE REPORT OF POLYPOIDAL CHOROIDAL VASCULOPATHY: REVIEW OF DIAGNOSIS AND THERAPEUTIC INTERVENTIONS

#### Abstract Title

A CASE REPORT OF POLYPOIDAL CHOROIDAL VASCULOPATHY: REVIEW OF DIAGNOSIS AND THERAPEUTIC INTERVENTIONS

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#### Abstract Type

Case Report

#### Introduction

Polypoidal choroidal vasculopathy (PCV) is believed to be a subtype of neovascular Age Macular Degeneration and associated with an abnormal branching of vessels with aneurysmal dilations. PCV presents with multiple, recurrent serosanguineous retinal pigment epithelial detachments. Patients with PCV may have complete regression without severe vision loss with photodynamic therapy (PDT) and anti-VEGF treatment.

#### Case Illustration

A 58 years-old woman came with 2 weeks of sudden blurred vision on left eye (LE) with history of uncontrolled hypertension. Her LE visual acuity was 1/300. LE fundus examination showed orange-reddish bulb-like lesions around macula. The Central Macular Thickness was 451 $\mu$ m. She underwent Pneumatic Displacement with SF<sub>6</sub> tamponade and Bevacizumab intravitreal injection and her visual acuity one day after procedure became 1/60. Her visual acuity two weeks after was 1/300 with vitreous bleeding. She underwent Pars Plana Vitrectomy with Bevacizumab intravitreal injection and her visual acuity was 1/300 one day after. Her last visual acuity was increased to 1/60 with clear vitreous and minimal submacular bleeding. OCT examination after surgery cannot be recorded due to lost to follow up.

#### Discussion

A wide spectrum of treatment options for PCV, including focal laser photocoagulation, PDT, anti-VEGF and various combinations, but fewer studies reporting the results of bevacizumab for PCV and favorable outcomes in improving vision and macular exudation.

#### Conclusion

PCV is potentially vision threatening with high recurrence rate. Better visual prognosis can still be obtained by making definitive diagnosis and treatment. Educating about recurrency is very important in daily practices for ophthalmologist.

#### Keyword

Polypoidal Choroidal Vasculopathy, Age Macular Degeneration, Bevacizumab

#### Category

E-Poster

#### Latest Update

August 14, 2020

#### Status

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### Epos-VR-08

## SURGICAL APPROACH OF INTRAOCULAR FOREIGN BODY HIDDEN IN POSTERIOR SCLERA ACCOMPANIED BY TOTAL RETINAL DETACHMENT

#### Abstract Title

SURGICAL APPROACH OF INTRAOCULAR FOREIGN BODY HIDDEN IN POSTERIOR SCLERA ACCOMPANIED BY TOTAL RETINAL DETACHMENT

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#### Abstract Type

Case Report

#### Introduction

Management of ocular trauma remains a challenge. Wide variety of cases causes each surgical to be performed with different procedures and careful consideration.

#### Case Illustration

A patient was consulted with blindness after having an accident 1 month earlier. He said that he had undergone foreign body extraction from the eye, but after the surgery vision remained poor. Clinical examination found that visual acuity was no light perception, normal ocular surface, and mid dilated pupil with no light reflex. Fundus examination revealed vitreous hemorrhage with retinal detachment. Surprisingly the CT scan revealed a metallic foreign body embedded in the posterior sclera. He was administered high dose methylprednisolone, antibiotics, and planned to undergo vitrectomy surgery.

#### Discussion

Extraction of the foreign body through the sclera proved to be challenging due to its considerable size. Thus it was decided to evacuate it through the cornea after performing lensectomy (seen on the video). It also turned out that there were sands attached to the foreign body that could potentially adhere to choroid and cause sympathetic ophthalmia. After the foreign body has been removed, no action was taken for reattach the retina. Considerations include poor visual prognosis and problem associated with silicone oil.

#### Conclusion

Although at the expense of clear lens, extraction of foreign body through cornea is highly considered in some cases. Decision not to attach the retina could be reached after considering various risks.

#### Keyword

Management of Intraocular Foreign Body, Retinal Detachment

#### Category

Free Paper Presentation

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### Epos-VR-10

## ISOLATED RETINAL CAPILLARY HEMANGIOBLASTOMA : A RARE CASE

#### Abstract Title

ISOLATED RETINAL CAPILLARY HEMANGIOBLASTOMA : A RARE CASE

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#### Abstract Type

Case Report

#### Introduction

Retinal Capillary Hemangioblastoma (RCH) is a vascular hamartoma which generally has clinical onset in the first two decades of life. It is may associate with Von Hippel Lindau (VHL) disease because RCH is the most frequent and earliest manifestation of VHL disease.

#### Case Illustration

A 20 years old male presented with painless blurred vision in left eye since 2 weeks prior to the admission and no other complaint. He had no significant medical history, trauma and family history. His best corrected visual acuity was 20/20 in right eye and 20/400 in left eye with normal anterior segment. Fundus examination on left eye revealed a globular reddish lesion with dilated feeding vessel and tortuous draining vein at the inferotemporal retina. The B-Scan Ultrasonography showed dome shaped lesion. We performed abdominal ultrasonography and brain MRI to detect other lesion and showed the normal results. Argon laser photocoagulation has performed as a treatment.

#### Discussion

Retinal Capillary Hemangioblastoma is one type of Retinal Hemangioma. The pathogenesis may associated with Von Hippel Lindau Disease by "VHL tumor suppressor gene" which is located on chromosome 3p25-26. The radiological imaging have performed to detect systemic lesion and the results were no tumour found. Argon laser photocoagulation also has performed as a treatment. The outcome of visual acuity became 20/300 and fundus examination showed the scar around at lesion with illness margin.

#### Conclusion

Based on several ophthalmologist and systemic examinations, we found a Retinal Capillary Hemangioblastoma as the only manifestation in this case. However, the routine follow-up and systemic workout should be recommended.

#### Keyword

Retinal Capillary Hemangioma; Von Hippel Lindau; Argon Laser Photocoagulation.

#### Category

E-Poster

#### Latest Update

August 15, 2020

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## Epos-VR-11

### Non-Ischemia Central Retina Vein Occlusion with Macular Edema in Young Patient

#### Abstract Title

Non-Ischemia Central Retina Vein Occlusion with Macular Edema in Young Patient

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#### Abstract Type

Case Report

#### Introduction

Central retinal vein occlusion (CRVO) is a condition due to thrombus at central or posterior vascularization of the optic nerve head. Decreased visual acuity manifestation of CRVO has correlation with macula edema.

#### Case Illustration

A 32 year-old male complained sudden blurred vision on his left eye since a week ago. Visual acuity on the left eye was 0.4 LogMAR and not improved with pinhole, but the right eye was normal. No abnormalities were found on anterior segment and no relative afferent pupillary defect. His left eye had optic nerve head edema, vascular dilatation, tortuous vein, dot blot hemorrhage, flame shape hemorrhage, and decreased macula reflex. He had no systemic disease, glaucoma, and eye trauma. Fundus photography and optical coherence tomography (OCT) showed macula edema with central macular thickness 325  $\mu\text{m}$ . The patient was diagnosed with non ischemic CRVO dan given intravitreal aflibercept injection three times periodically. His visual acuity was improved to 0.0 LogMAR with central macular thickness 260  $\mu\text{m}$

#### Discussion

Macular involving CRVO are usually acutely symptomatic with the sudden onset decrease in central vision or visual field defect. Anti-vascular endothelial growth factor (Anti-VEGF) agents are commonly used to treat macular edema, neovascularization and risk of ocular angiogenesis. Non-ischemia CRVO may resolve completely without any complications or convert to an ischemia CRVO. This patient was treated with anti-VEGF agent and resolved completely.

#### Conclusion

Early diagnosis and prompt treatment would give good visual acuity result. Aflibercept intravitreal injection is one of available anti-VEGF therapy option

#### Keyword

Central retinal vein occlusion, macular edema, anti-VEGF intravitreal injection

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

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## Epos-VR-12

### Central Retinal Artery Occlusion with Impending Macular Hole – A Case Report

#### Abstract Title

Central Retinal Artery Occlusion with Impending Macular Hole – A Case Report

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#### Abstract Type

Case Report

#### Introduction

To report a case of central retinal artery occlusion with impending macular hole on the right eye of a 74-year-old male.

#### Case Illustration

A 74-year-old male, admitted to hospital with chief complaint of couldn't see everything suddenly on his right eye after waking up in the morning since a day before came to hospital. He was an active smoker. Cataract surgery was done a year ago. Blood pressure was 200/100. On eye examination showed that his visual acuity was totally blind on right eye. RAPD was found on right eye. Slit – lamp examination of the right eye showed iridectomy and IOL in the bag. Fundus examination showed superficial macular opacification and cherry red spot. His fellow eye was normal. OCT has shown impending macular hole.

#### Discussion

This patient was diagnosed with CRAO with impending macular hole on the right eye and hypertensive emergency, based on the symptoms of painless, acute, monocular vision loss, and BP > 180/120. Fundus examination showed superficial macular opacification and cherry red spot. However, the OCT shows impending macular hole. This condition may be associated with various forms of macular pathology, such as CRAO. Ocular massage was a conservative therapy that may cause emboli to travel more distally to reduce the area of ischemia, but if the occlusion last longer than 240 minutes produce irreversible damage. This required more diagnostic procedure, like FFA. Consultation with Internist was needed for management.

#### Conclusion

CRAO with impending macular hole was a rare case.

#### Keyword

CRAO, cherry red spot, macular hole.

#### Category

E-Poster

#### Latest Update

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### Epos-VR-13

## OPTIC DISC PIT MACULOPATHY IN A 13 YEARS OLD CHILD: A RARE CASE

#### Abstract Title

OPTIC DISC PIT MACULOPATHY IN A 13 YEARS OLD CHILD: A RARE CASE

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#### Abstract Type

Case Report

#### Introduction

Optic disc pit is a rare congenital abnormality of the optic disc. It has been known that it may develop serous macular detachment. It is generally appears in the third or fourth decade of life; however, cases of serous detachment in children have been reported. Treatment includes argon laser to the peripapillary region, pneumatic displacement of the submacular fluid, macular buckling surgery, vitrectomy combined with laser and/or gas injection.

#### Case Illustration

A 13 years old male presented to us with complaints of blurred vision in right eye started a month ago. No history of trauma. On examination, her visual acuities were 20/50 right and 20/20 left eye. There was no improvement with correction. Both anterior segments were normal, with normal intraocular pressures. OCT imaging showed optic disc pit located temporally, with associated serous macular detachment in the right eye.

#### Discussion

Although many different treatments have been tried, there is no consensus on the most effective. Conservative management of optic disc pit maculopathy was first advocated because 25% of cases resolved spontaneously. This patient still observed with consideration of the patient's young age, good vision and stable disease progression during observation. After 12 weeks observation, there is no significant change in the examination of the visual acuity, fundus examination and OCT imaging.

#### Conclusion

Currently there is no universally accepted treatment for optic disc pit maculopathy because the pathogenesis of the disease is not yet fully understood. In pediatric cases, 3-6 months of follow-up before any surgical and invasive procedures is appropriate.

#### Keyword

Optic disc pit maculopathy, OCT imaging, stable disease progression.

#### Category

E-Poster

#### Latest Update

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### Epos-VR-14

## Epiretinal Membrane Following Pars Plana Vitrectomy, Photocoagulation, Intravitreal Bevacizumab in the Treatment of Macular Edema Secondary to Central Retinal Vein Occlusion

#### Abstract Title

Epiretinal Membrane Following Pars Plana Vitrectomy, Photocoagulation, Intravitreal Bevacizumab in the Treatment of Macular Edema Secondary to Central Retinal Vein Occlusion

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#### Abstract Type

Case Report

#### Introduction

Central Retinal Vein Occlusion (CRVO) results from thrombosis of the central retinal vein that can causes a increase in retinal capillary pressure resulting leakage of fluid and blood into the retina

#### Case Illustration

A 50-year-old male had sudden blurred vision on the left eye since 2 weeks. Visual acuity was 3 meter counting finger. Pupillary reflex was normal and no abnormalities were found in anterior chamber. The fundus examination found round optic nerve head, blurry demarcated, difficult to evaluate CDR, flame shape hemorrhage, neovascularization, and decreased macular reflex. The fellow eye was sound. He had history of uncontrolled hypertension without warning sign. Optical coherence tomography (OCT) of the left eye showed the central macular thickness (CMT) was 342  $\mu$ m. He was diagnosed with left eye CRVO and macular edema. Treatment was conduct with laser photo coagulation and intravitreal injection. After 8 months therapy, the OCT showed progressive deformation of the retinal profile, CMT was 416  $\mu$ m and revealed epiretinal membrane. The patient got pars plana vitrectomy and endolaser surgery. The final outcome was no improvement and attached retinal.

#### Discussion

Patients older than 30 year old are likely to develop CRVO. Macular edema involvement are usually acutely decrease central vision. Anti-VEGF intravitreal injection was common to treat macular edema and PRP for neovascularization. The patient received anti-VEGF, PRP and surgical management, but the disease still got progression. We assume that this condition was caused by uncontrolled underlying disease

#### Conclusion

Prompt and multidisciplinary management are acquired to treat CRVO.

#### Keyword

Epiretinal membrane, central retinal vein occlusion, macular edema.

#### Category

E-Poster

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## Epos-VR-15

### DIFFERENTIAL APPROACHES IN MANAGEMENT OF DIABETIC RETINOPATHY: CASE SERIES

#### Abstract Title

DIFFERENTIAL APPROACHES IN MANAGEMENT OF DIABETIC RETINOPATHY: CASE SERIES

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#### Abstract Type

Case Report

#### Introduction

Diabetic retinopathy (DR) is the leading cause of vision loss and blindness. DR is classified into nonproliferative diabetic retinopathy (NPDR) and proliferative diabetic retinopathy (PDR).

#### Case Illustration

Case one, 41-year-old female with history of type 2 Diabetes Mellitus (DM) for five years. The patient was diagnosed with severe NPDR with diabetic macular edema (DME) on both eyes. The patient underwent intravitreal anti VEGF injection on both eyes. Case two, 62-year-old with history of type 2 DM for ten years. The patient was diagnosed with PDR with DME on both eyes. The patient underwent panretinal laser photocoagulation (PRP) on both eyes. Case three, 29-year-old female with history of type 1 DM for 15 years. The patient was diagnosed with PDR on both eyes and tractional retinal detachment (TRD) on left eye. The patient underwent vitrectomy with retinectomy procedure on left eye. Retinal Nerve Fiber Layer (RNFL) thickness in Optical coherence tomography (OCT) examination was decreasing in case one. In case two, stable DR was reached after laser PRP. In case three, the outcome was attached retina of the left eye with raised visual acuity.

#### Discussion

DR is the most frequent cause of preventable blindness in working-aged adults. DR is a major microvascular complication of diabetes that impair retinal vasculature due to chronic hyperglycemia. Early detection of DM related complications requires adequate history, including asking the duration, treatment, past glycemic control and history of other systemic diseases

#### Conclusion

Understanding the comprehensive management of DR optimize the outcome of the treatment.

#### Keyword

diabetic retinopathy, treatment

#### Category

E-Poster

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## Epos-VR-16

### THE CHALLENGING MANAGEMENT OF TOTAL RHEGMATOGENOUS RETINAL DETACHMENT WITH PATHOLOGIC MYOPIA AND LENS SUBLUXATION IN MARFAN SYNDROME: A CASE REPORT

#### Abstract Title

THE CHALLENGING MANAGEMENT OF TOTAL RHEGMATOGENOUS RETINAL DETACHMENT WITH PATHOLOGIC MYOPIA AND LENS SUBLUXATION IN MARFAN SYNDROME: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Retinal detachment (RD) is a well-known complication of Marfan Syndrome (MS). Its incidence ranging from 5% to 26.5%, and tends to occur bilaterally. We report a case of RD in MS with pathologic myopia and lens subluxation.

#### Case Illustration

A 26-year-old female presented with a blurred vision of the left eye for 3 days. There was sudden curtain-like obscuration of her vision preceded by floaters. The patient showed tall stature, arachnodactyly, Walker's sign, and Steinberg's sign. Visual acuity of the left eye was hand movement wrong projection, while the right eye was 6/7.5 with -18.00 D spectacles. The lens was subluxated inferotemporally. Fundus examination revealed RD in all quadrants, with multiple breaks at the superonasal area. Macula was off. The patient underwent vitrectomy with silicone oil tamponade of the left eye, six weeks after initial visit. Three weeks postoperatively, there was no progression of her left eye vision. The retina was redetached inferiorly. A second vitrectomy was done, with lensectomy and silicone oil exchange. The last condition revealed attached macula, but there was residual subretinal fluid at inferior retina.

#### Discussion

High myopia, lattice degeneration, vitreous liquefaction, and connective tissue abnormality resulting in lens subluxation, are risk factors for RD in MS. Even after two surgeries, the retina was still detached inferiorly, demonstrating the challenges of RD surgery in young MS patients.

#### Conclusion

RD and other ocular manifestations in MS should be detected earlier to preserve anatomy and visual function. Proper and prompt surgical technique may be needed, however the surgical outcome may be guarded.

#### Keyword

Marfan syndrome, rhegmatogenous retinal detachment, retinal detachment surgery.

#### Category

E-Poster

#### Latest Update

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## Epos-VR-17

### Small and Sharp High Velocity Penetrating Ocular Trauma : A Case Report

#### Abstract Title

Small and Sharp High Velocity Penetrating Ocular Trauma : A Case Report

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#### Abstract Type

Case Report

#### Introduction

Penetrating trauma in the orbit and intraorbital foreign bodies with the small and sharp high velocity ocular trauma are rare and could be associated with vascular and optic nerve injuries.

#### Case Illustration

Thirty five-year-old male patient was referred with chief complaint of painful and blurry left eye. History of penetrating trauma in left orbit 1 day of evolution caused a accidentally hit by a metal fragment from the iron chisel while hammering stone during worked without eye protection. Left eye visual acuity was 6/6 with clear corneal examination, laceration ? 1mm on 3 O'Clock side were found on iris. On posterior segment we observed a floating object in vitreous body. Diagnosed with left eye intra orbital foreign body.

#### Discussion

The CT Scan report described the presence of a Corpus alienum (metal density) in left orbita, the foreign body was completely removed by pars plana vitrectomy. One week post surgery, visual acuity was 6/6. The retina within normal limit.

#### Conclusion

The analysis of the clinical evolution of the patient allowed identifying the key events to approach this type of cases. Primary early vitrectomy surgery are suggested for prevention of retinal detachment with good post operative recovery.

#### Keyword

Penetrating eye trauma, Intraorbital foreign body, Pars plana vitrectomy

#### Category

E-Poster

#### Latest Update

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## Epos-VR-18

### Challenge in Managing Scleral Rupture on COVID-19 Positive Patient: A Case Report

#### Abstract Title

Challenge in Managing Scleral Rupture on COVID-19 Positive Patient: A Case Report

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#### Abstract Type

Case Report

#### Introduction

Since March 2020, Indonesia has announced cases of positive Corona Virus Disease 2019 (COVID-19). Inevitably, trauma cases still happened regardless of pandemic situation. A proper personal protective equipment (PPE) and supporting facility would be required in order to manage such case. With lack of guidelines in such condition, performing microsurgery using Bio-Safety Level 3 (BSL-3) equipment can be challenging.

#### Case Illustration

Male, 49 years-old, presented with sudden blurred vision of the left eye since 5 days before admission due to trauma. Patient was diagnosed with scleral rupture of the left eye with suspicious intra-ocular lens (IOL) dislocation. Rapid test for COVID-19 was performed, and the result of COVID-19 IgM and IgG came back positive. Patient then referred to Universitas Indonesia Hospital for further management. He underwent scleral rupture repair, hyphema irrigation with iris and IOL reposition. Challenges occur during slit-lamp and ultrasonography examination, as well as performing surgery in BSL-3 setting.

#### Discussion

Bio-Safety Level 3 operating theater and ward are the basic need for performing emergency surgery in this pandemic situation, in order to provide safety for both patients and health-care workers. Fog formed on goggles, microscope and slit lamp while using BSL-3 suit in a negative pressure room caused difficulties in performing examination and surgery. Special consideration is also needed for general cleaning ophthalmology equipments with optical components.

#### Conclusion

Current pandemic adds a challenging condition for ophthalmologist in delivering optimal emergency setting patient management. Hospital preparedness in providing PPE and supporting facilities are necessary in such condition.

#### Keyword

Ophthalmology emergency, Corona Virus Disease 2019, COVID-19

#### Category

E-Poster

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## Epos-VR-19

### VITREOUS HEMORRHAGE AFTER PNEUMATIC DISPLACEMENT ON MASSIVE SUBMACULAR HEMORRHAGE

#### Abstract Title

VITREOUS HEMORRHAGE AFTER PNEUMATIC DISPLACEMENT ON MASSIVE SUBMACULAR HEMORRHAGE

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#### Abstract Type

Case Report

#### Introduction

Submacular hemorrhage (SMH) is blood between neurosensory retina and retinal pigment epithelium. Etiology SMH most often caused by choroidal neovascularization (CNV) including age-related macular degeneration (AMD) and polypoidal choroidal vasculopathy (PCV). SMH causes sudden visual loss.

#### Case Illustration

A 47 years old man came to M.Djamil hospital, june 17th 2020, with chief complain sudden visual loss right eye 6 days ago. No history trauma, use glasses, or previous surgery. History diabetes mellitus and hypertension denied. Ophthalmology examination, visual acuity (VA) 1/60 right eye (RE) and 20/20 left eye (LE). Funduscopy RE shows massive submacular hemorrhage. Optical coherence tomography (OCT) RE shows large hyporeflectivity in submacular. Treatment RE with intravitreal perfluoropropane gas (C3F8) and bevacizumab, followed face-down position. Ten days after treatment, VA 20/200, funduscopy shows complete displacement SMH from foveal center, OCT shows macular structure back to normal. Two weeks after treatment, VA 1/300, funduscopy shows vitreous hemorrhage (VH), and patient suggested pars plana vitrectomy (PPV). One month after PPV, VA 20/100, retina attached, normal IOP.

#### Discussion

Treatment strategy massive SMH in this patient is displacement blood from foveal center use injection expansile gas and treatment underlying disease use anti-VEGF agents. Breakthrough VH is one of complication from this procedure. Risk factor of VH is increased on massive SMH, especially if area bleeding extends beyond vascular arcades. Patient with VH can resolve spontaneously, but sometimes need PPV.

#### Conclusion

Pneumatic displacement with intravitreal anti-VEGF is effective and safe treatment for massive SMH because CNV. Although VH is possible complication, VA after VH cleared still good.

#### Keyword

submacular hemorrhage, pneumatic displacement, vitreous hemorrhage

#### Category

E-Poster

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## Epos-VR-20

### DECREASED VISION AS INITIAL MANIFESTATION OF CHRONIC MYELOGENOUS LEUKEMIA : A CASE REPORT

#### Abstract Title

DECREASED VISION AS INITIAL MANIFESTATION OF CHRONIC MYELOGENOUS LEUKEMIA : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Chronic myelogenous leukemia (CML) contributes in 20% of all leukemias affecting adults. Ophthalmologic manifestations can be the initial presenting signs of leukemia. Therefore, awareness of the ophthalmologic manifestations is important.

#### Case Illustration

A 50 year-old man, presented with sudden blurred vision both eyes for the past two days. The visual acuity was 2/60 OU. Anterior segment examination of both eyes within normal limit. Fundus examination revealed Roth spots at poles posterior and macula. He reported fatigue for the past one month. There was no family history of blood disease. On examination BP was 110/80 mmHg, HR was 70/min, and splenomegaly. Laboratory tests revealed: leukocyte 405.1x10<sup>3</sup>/μl; blasts 34%; Hb 9.6 g/dL; thrombocyte 250x10<sup>3</sup>/μl. He was referred to the department of hematology. Bone marrow biopsy showed hypercellular marrow, increased myeloid to erythroid ratio and the BCR/ABL gene fusion by PCR was positive. Therefore, the diagnosis of CML was confirmed. He received imatinib 400mg daily. One year later, he had clinical improvements, the fundus change resolved and visual acuity improved to 20/200 on his right and 5/60 on his left eye.

#### Discussion

Ocular involvement of CML can affect all intraocular structures. Ocular manifestations include retinal hemorrhages, Roth spots, peripheral retinal neovascularization, pallor and swelling of the optic nerve, retinal venous tortuosity. Due to immediate induction of systemic chemotherapy has been recognized and well accepted as beneficial for reducing complications.

#### Conclusion

Early detection and intervention are important to prevent serious complication and preserve good visual outcome. Ophthalmologist have an important role in considering decreased vision as a initial manifestation of hematologic disorders.

#### Keyword

Chronic Myelogenous Leukemia, Retinal Hemorrhage, Visual Loss

#### Category

E-Poster

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## Epos-VR-21

### MANAGEMENT CENTRAL SEROUS CHORIORETINOPATHY WITH INJECTION BEVASIZUMAB

#### Abstract Title

MANAGEMENT CENTRAL SEROUS CHORIORETINOPATHY WITH INJECTION BEVASIZUMAB

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#### Abstract Type

Case Report

#### Introduction

Central Serous Chorioretinopathy (CSC) is characterized by serous neurosensory detachment decompensation of the retinal pigment epithelium (RPE). Several recent studies speculated that anti-vascular endothelial growth factor (VEGF) therapy might lead to the resolution of subretinal fluid in CSC by reducing choroidal vascular hyperpermeability based on its anti permeability properties

#### Case Illustration

A male 43 th years old came to hospital with blurred of left eye since one month ago specifically at the central area. Visual acuity (VA) 20/100, normal anterior segment, on funduscopy have macular edema. Optical Coherence Tomography (OCT) founded subretinal fluid with macular thickness 357. The patient was diagnose with Central Serous Chorioretinopathy . Patient was treatment with oral carbonic anhydrase inhibitor, acetazolamide, beta blocker. CSC was persistent. After 3 month, we gave injection bevacizumab intravitreal. VA one month after that was 20/30, macular edema (+) with macular thickness 268. We done the second injection bevacizumab intravitreal. After 1 month ,VA the left eye become 20/20 and no macular edema.

#### Discussion

Acute CSC often resolves spontaneously within a few month, but not for this patient. The patient feel his condition was disturbed his activities. After more than 3 month we decide to gave the patient injection bevacizumab intravitreal . VA was 20/20 after 2 times injection bevacizumab intravitreal.

#### Conclusion

Intravitreal bevacizumab is an effective treatment for chronic Central Serous Chorioretinopathy

#### Keyword

Central Serous Chorioretinopathy , intravitreal bevacizumab, macular edema.

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-VR-22

### Comparing the OCT Outcomes of Intravitreal Injection Ranibizumab VS Bevacizumab: A Case Report of Macular BRVO

#### Abstract Title

Comparing the OCT Outcomes of Intravitreal Injection Ranibizumab VS Bevacizumab: A Case Report of Macular BRVO

#### First Author

sandri

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#### Abstract Type

Case Report

#### Introduction

Macular BRVO refers to an occlusion of a venule within the macula with the majority of patients have underlying systemic arterial diseases such as hypertension, diabetes mellitus, and hyperlipidemia result in arteriosclerosis.

#### Case Illustration

A 32-year-old man with a BMI of 38.4 and high total cholesterol concentration (220 mg/dl) with a one-week left eye blurred vision which was suddenly worsening. The left eye (LE) visual acuity (VA) was 20/50 cannot be corrected and the right eye (RE) VA was 20/20. Fundus examination of the LE found marked flame-shaped retinal hemorrhages, cotton wool spots, and soft exudate over the inferior macular area. An optical coherence tomography (OCT) of LE found macular thickening. After two weeks of injection bevacizumab, the LE VA became 20/25 and the fundus examination was not improved. The patient occurring worsted outcome after two months followed up, with OCT examination determined macula thickening. We decided to do ranibizumab intravitreal injection immediately. The patient was successfully treated after receiving the second injection proven after 2 weeks follow up by the vision had improved to 20/20, and almost complete resolution of macular edema on OCT examination but still there is no improvement in fundus examination.

#### Discussion

Intravitreal treatment with ranibizumab was found to effectively provide OCT examination outcome improvement. Showing significant visual gains with a near-normal OCT result. While bevacizumab found to be less effective in treating BRVO in this patient.

#### Conclusion

In this case study, we found that the OCT outcomes improved after giving the second intravitreal injection of ranibizumab to BRVO patients

#### Keyword

Ranibizumab, Bevacizumab, Anti VEGF injection, BRVO

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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### Epos-VR-23

## SYSTEMATIC REVIEW OF ADENOSINE 2A RECEPTOR AS A THERAPEUTIC TARGET IN DIABETIC RETINOPATHY MODELS

#### Abstract Title

SYSTEMATIC REVIEW OF ADENOSINE 2A RECEPTOR AS A THERAPEUTIC TARGET IN DIABETIC RETINOPATHY MODELS

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#### Co Author

Michelle Cancera Angelita (National Brain Center Prof. Dr. dr. Mahar Mardjono)

#### Abstract Type

Research

#### Introduction & Objective

Diabetic retinopathy is a major complication in people with Diabetes Mellitus and being the fourth leading cause of blindness globally. The pathogenesis is associated with Inflammatory mediators produced by microglia that generate neuroinflammation and vascular abnormalities. Adenosine 2A Receptor (A2AR) is known has contribution through cAMP signaling. This study aims to review systematically the studies of A2AR as a therapeutic target in DR models

#### Method

sixteen articles was identified and met inclusion criteria after a comprehensive search through PubMed, The Cochrane Library, BMJ, Scopus, ScienceDirect, and Clinicalkey. We searched over the last 10 years (2010-2020) articles. After a complete review of the full-text manuscript, there were 6 studies reviewed systematically

#### Result

From 6 studies, A2AR had a significant effect of death cell and inflammation in diabetic retinopathy (p

#### Conclusion

There was still limited evidence for the effectiveness of A2AR as a therapeutic target in diabetic retinopathy. Nevertheless, this systematic review demonstrated that A2AR could be a potential therapeutic target in diabetic retinopathy.

#### Keyword

Adenosine 2A Receptor (A2AR); Diabetic Retinopathy; Microglia

#### Category

E-Poster

#### Latest Update

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### Epos-VR-24

## THE EFFECTS OF FENOFIBRATE IN THE PROGRESSION OF DIABETIC RETINOPATHY IN PATIENTS WITH TYPE 2 DIABETES

#### Abstract Title

THE EFFECTS OF FENOFIBRATE IN THE PROGRESSION OF DIABETIC RETINOPATHY IN PATIENTS WITH TYPE 2 DIABETES

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#### Co Author

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#### Abstract Type

Research

#### Introduction & Objective

Diabetic retinopathy (DR) is the most common microvascular complication of diabetes which can cause vision loss as the result of complications. Fenofibrate may help reduce the progression of diabetes in the retina. Our study aims to evaluate the impacts of fenofibrate on the progression of DR.

#### Method

A systematic review was conducted. Literature search using PubMed, Science Direct and Cochrane database. Relevant Randomized Control Trials (RCTs) within the last 10 years, and written in English are obtained. Our inclusion criteria included DR in patients with type 2 diabetes and fenofibrate treatment. We evaluated relevant journals using a Study Appraisal Tool from Centre for Evidence-Based Medicine (CEBM), Oxford.

#### Result

Two relevant articles were thoroughly observed, consisted of 2 clinical trials study. Both studies reported a better outcome of preventing the progression of DR with fenofibrate compared to placebo. One of the studies showed that fenofibrate could reduce the risk of DR progression (Relative Risk (RR) < 1) and a greater impact in patients with mild retinopathy at the baseline (Relative Risk Reduction (RRR) 0.70, P < 0.001). Even though the other study reported a similar beneficial effect of fenofibrate (RR

#### Conclusion

Fenofibrate can be an effective treatment to prevent the progression of diabetic retinopathy. However, fenofibrate treatment requires continued use to maintain the benefit. Therefore, further research should be conducted to determine the use of fenofibrate in DR management.

#### Keyword

Diabetic Retinopathy, Fenofibrate

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-VR-25

### EFFICACY OF RITUXIMAB ON THYROID EYE DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

#### Abstract Title

EFFICACY OF RITUXIMAB ON THYROID EYE DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

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#### Abstract Type

Research

#### Introduction & Objective

Thyroid eye disease (TED) is one of the most common extra thyroidal manifestations of Grave's hyperthyroidism. Around 1 in 20 patients has moderate-to-severe and active TED. Rituximab is a human chimeric/mouse monoclonal antibody that targets CD-20 receptor on the surface of B-cell lymphocyte. Numbers of studies indicated rituximab may be beneficial for thyroid eye disease. This study aims to review the existing evidence on the efficacy of rituximab in patients with TED.

#### Method

Major online journal databases (Cochrane Library, PubMed, Science Direct, and ClinicalTrials.gov) was searched using the following Keywords: Thyroid Eye Disease OR Grave's Eye Disease OR Thyroid Eye Disease OR Grave's Orbitopathy OR Grave's Ophthalmopathy AND rituximab, and narrowed down further to journals published within the last 10 years. Only Randomized Controlled Trials (RCTs) which met the predefined inclusion criteria were included. Relevant journals were then critically appraised using Study Appraisal Tool from CEBM.

#### Result

Two relevant studies were included in the studies. A total of 29 patients received intravenous rituximab 1000 mg twice at two week interval. Clinical Activity Score (CAS) from one study was reported significantly improved CAS score ( $P=0.006$ ) compared to another study with no significant improvement of CAS score ( $P= 0.41$ ) at 24 weeks. Pooled analysis comparing control and rituximab group showed a large effect size (Mean Difference 0.75, 95% confidence interval [-1.01, 2.51]).

#### Conclusion

There was conflicting evidence on the effect of rituximab on TED. Further studies with larger sample size need to be carried out.

#### Keyword

Thyroid Eye Disease, Grave's Ophthalmopathy, Rituximab

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-POS-01

### SIMULTANEOUS MANAGEMENT OF BILATERAL RETINOBLASTOMA INTRAOCULAR

#### Abstract Title

SIMULTANEOUS MANAGEMENT OF BILATERAL RETINOBLASTOMA INTRAOCULAR

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#### Abstract Type

Case Report

#### Introduction

Retinoblastoma is an embryonal tumor originating from retinal cells and is a primary intraocular malignancy that often occurs in children. Therapeutic modalities that can be done are chemotherapy, cryotherapy, laser therapy, radiation and enucleation. The purpose of this study is to increase knowledge about bilateral retinoblastoma disease and how to manage it appropriately.

#### Case Illustration

A 1.5 years old boy with complaints right eye looks smaller since 2 weeks ago. Visual acuity on the right eye was no light perception, there was leukocoria, posterior segment is obtained with cloudy vitreous, There was mass (+), bleeding (+) in the retina. Visual acuity on the left eye was following object, there was mass in superonasal retina. The MRI results are consistent with bilateral (endophtic) retinoblastoma. Patients were diagnosed with Right Eye intraocular Retinoblastoma group D, Left Eye intraocular Retinoblastoma group B. The therapy was enucleation on the right eye, and Laser Indirect Ophthalmology on the left eye.

#### Discussion

Retinoblastoma therapy based on International Classification for Intraocular Retinoblastoma (ICIRB) classification, for the A - C groups using focal therapy with laser photocoagulation or cryotherapy, for bilateral D - E groups chemoreduction and enucleation in the worse eye and conservative in the better eye with radiotherapy laser photocoagulation or cryotherapy.

#### Conclusion

The choice of therapy in retinoblastoma cases depends on the extent of the disease in the eye and the spread of the disease. Therapy for retinoblastoma must be done simultaneously, even with different groups.

#### Keyword

Retinoblastoma, Enucleation, Laser Indirect Ophthalmology

#### Category

E-Poster

#### Latest Update

August 08, 2020

#### Status

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## Epos-POS-02

### CASE SERIES OF THE MANAGEMENT OF CONGENITAL CATARACTS

#### **Abstract Title**

CASE SERIES OF THE MANAGEMENT OF CONGENITAL CATARACTS

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#### **Abstract Type**

Case Report

#### **Introduction**

Any lens opacification present at birth or early childhood is defined as congenital cataract. Congenital cataract is a leading cause of visual deprivation in a child. Goal of its management is to eliminate cataracts as early as possible to reduce the risk of amblyopia. Early diagnosis and timely management is essential to prevent permanent visual impairment.

#### **Case Illustration**

Case one, a 4-month-baby boy with bilateral congenital cataract and suspected Congenital Rubella Syndrome (CRS). Case two, a 7-month-baby girl with bilateral congenital cataract, Global Delayed Development, and suspected CRS. Case three, a 7-month-baby girl with bilateral congenital cataract, Down syndrome, and hypotirodism. Case four, a 3-month-baby boy with bilateral congenital cataract, bilateral microcornea, and bilateral microphthalmia. Case five, a 4-month-baby girl with bilateral congenital cataract. All five patients underwent surgical intervention including aspiration irrigation, primary posterior capsulotomy and anterior vitrectomy on both eyes. On one week postoperative examination, all babies were found aphakic and given +20.0 D monofocal spectacles on both eyes while advised to control in one month

#### **Discussion**

Aspiration irrigation, primary posterior capsulotomy and anterior vitrectomy technique is the preferred methods in pediatric cataract surgery in younger patients. After surgery, spectacles correction has to give immediately to prevent amblyopia.

#### **Conclusion**

The goal of congenital cataract management is to prevent amblyopia by immediately removing visually significant cataracts for a better visual prognosis. The timely removal of cataract followed by prompt visual rehabilitation is of utmost importance management in children.

#### **Keyword**

Congenital cataracts, pediatric cataract surgery, amblyopia

#### **Category**

E-Poster

#### **Latest Update**

August 11, 2020

#### **Status**

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## Epos-POS-03

### THE MANAGEMENT OF PRIMARY AND SECONDARY CHILDHOOD GLAUCOMA : A CASE SERIES

#### **Abstract Title**

THE MANAGEMENT OF PRIMARY AND SECONDARY CHILDHOOD GLAUCOMA : A CASE SERIES

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#### **Abstract Type**

Case Report

#### **Introduction**

Glaucoma in children is a potentially blinding condition. Various presentations and etiologies characterize these rare glaucomas. It is less responsive to medications and often requires surgical intervention, such as trabeculectomy, aqueous tube shunt implantation or a cyclodestruction.

#### **Case Illustration**

Case 1, a 4 years old girl with secondary childhood glaucoma both eyes due to microspherophakia underwent tube shunt implantation for both eyes. Case 2, a 10 years old girl with juvenile open angle glaucoma (JOAG) both eyes underwent trabeculectomy with antimetabolite for left eye. Case 3, a 2 months old baby girl with secondary congenital glaucoma right eye due to anterior segment dysgenesis underwent cyclodestruction for right eye.

#### **Discussion**

The glaucomas of childhood is a heterogeneous group of disorders associated with elevated intraocular pressure and optic nerve damage. Trabeculectomy, tube shunt implantation and cyclodestruction are available for managing the medically uncontrolled IOP in childhood glaucoma patients.

#### **Conclusion**

The consideration when selecting a glaucoma surgical procedure is multifactorial, which depends on the medical resources available, surgeon's experience, and patient's condition and compliance.

#### **Keyword**

Childhood Glaucoma, trabeculectomy, tube shunt implantation.

#### **Category**

E-Poster

#### **Latest Update**

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#### **Status**

Submitted

## Epos-POS-04

### XERODERMA PIGMENTOSUM WITH BILATERAL OCULAR SQUAMOUS CELL CARCINOMA

#### Abstract Title

XERODERMA PIGMENTOSUM WITH BILATERAL OCULAR SQUAMOUS CELL CARCINOMA

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#### Abstract Type

Case Report

#### Introduction

Xeroderma pigmentosum (XP) is a rare genetic disease associated with skin and ocular surface malignancies. Patients are predisposed as high risk of malignant skin and ocular surface neoplasm. The purpose of this case report is to describe a rare case of XP with bilateral ocular surface squamous carcinoma.

#### Case Illustration

A 6-year-old girl diagnosed with XP was referred to Ophthalmology Department with chief complaint mass on both eyes since 1 year before admission. The patient underwent the examination under anesthesia and we found mass on the right eye covered almost all of the corneal surface, and the mass on the left eye covered almost half of the corneal surface together with medial canthal mass. The patient underwent excision of those masses for both eyes and the histopathological analysis revealed squamous cell carcinoma (SCC). Skin lesion on forehead area, left lower palpebral area, and upper lip area also revealed SCC.

#### Discussion

The etiology of XP is deficient repair of DNA damaged by UV radiation. Exposure to UV radiation leads to varied oculocutaneous manifestations. Ocular surface malignancy appeared in approximately 2% of XP cases. The two most common types of cancer found in XP patients are BCC and SCC.

#### Conclusion

Ocular surface malignancy in XP patient could be developed in early young age. Most of the ocular surface malignancy found in XP are SCC which are malignant, sight-threatening, and the recurrence rate is high, so early diagnosis, multidisciplinary, and proper treatment is a must.

#### Keyword

xeroderma pigmentosum, ocular squamous cell carcinoma

#### Category

E-Poster

#### Latest Update

August 12, 2020

#### Status

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## Epos-POS-07

### EVIDENCE-BASED CASE REPORT ATROPINE DOSE IN CHILDHOOD MYOPIA

#### Abstract Title

EVIDENCE-BASED CASE REPORT ATROPINE DOSE IN CHILDHOOD MYOPIA

#### First Author

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#### Abstract Type

Case Report

#### Introduction

Myopia is a major global problem in the world especially in East Asian where it has already reached a pandemic level. High myopia in childhood related to increased risk of macular atrophy, glaucoma and other causes of vision loss. Atropine has been studied vastly to slowing myopia progression in children. Despite the exact mechanism of atropine are still unknown, different atropine dose have been used yet the most effective dose is still controversial.

#### Case Illustration

10 years old boy has an impaired VA diagnosed with myopia (-6.5D LE and -7D RE). Atropine therapy was considered for this case. Which dose shows best result in this case?

#### Discussion

• Methods: Literature searching was conducted on three databases: Pubmed, Cochrane, and Clinical Key with Keywords of "Atropine", "Dose", "Myopia", and its synonym., filtered using MeSH terms and Title/Abstract. The eligibility criteria would be applied on all articles. Selected articles were critically appraised by two independent observers using Oxford Evidence-Based Medicine Critical Appraisal Tools of Systematic Review. • Result Out of 6 studies screened for duplication and assessed for eligibility, 2 final studies were appraised. Studies included were 2 meta-analysis, comprising total 19 studies (3137 children) on first study and 30 RCT (5422 eyes) in second study. All studies show that low dose atropine is a promising therapy for preventing myopia progression while showing the least side effect,

#### Conclusion

Low dose atropine indicate efficacy in slowing myopia progression in children while showing least side effect than other dose.

#### Keyword

Atropine, Dose, Myopia.

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

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## Epos-POS-08

### STERILE PERIOcular INFLAMMATION IN PRIMARY ORBITAL RETINOBLASTOMA

#### Abstract Title

STERILE PERIOcular INFLAMMATION IN PRIMARY ORBITAL RETINOBLASTOMA

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Ade Septriana

#### Author Institution

Department of Ophthalmology

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Suliaty P. Amir (Hasanuddin University)

Andi Pratiwi (Wahidin Sudirohusodo Hospital)

#### Abstract Type

Case Report

#### Introduction

Orbital involvement in retinoblastoma is fatal and its mortality is high in developing countries. In primary retinoblastoma, one of the most common presentations is periocular inflammation, which can be a sterile reaction.

#### Case Illustration

A 4 year-old girl presented with right painful orbital swelling since four days before admission. She was diagnosed with grade III orbital retinoblastoma one-year prior and underwent chemoreduction, but then discontinued after one cycle. Recent examination on right eye showed reddish eyelid and proptosis, with visible signs of periocular inflammation. Anterior segment evaluation on the affected eye revealed dilated conjunctival and episcleral vessels, chemosis, rubeosis iridis, fully dilated pupil, and notable leukokoria. Follow-up CT Scan in 2020 showed isodense lesion with calcification in the posterior pole of right eye with optic nerve enlargement indicating an extraocular extension. Complete blood count, most importantly leucocyte was normal, indicating non-infectious reaction, and Bone Marrow Punction showed no metastasis.

#### Discussion

Orbital cellulitis correlated well with the presence of advanced intraocular retinoblastoma, anterior chamber involvement, but not indicative of retinoblastoma extension. There are no studies mentioning chemotherapy withdrawal and TNM tumor staging factor correlated with sterile orbital cellulitis.

#### Conclusion

Sterile inflammatory reaction, is an uncommon yet possible presentation in orbital retinoblastoma. It is related with advanced stage of retinoblastoma. The inflammatory reaction can be caused by necrotic changes occurring in the ciliary body and trigger an inflammatory response in adjacent orbital soft tissue.

#### Keyword

Orbital retinoblastoma, Sterile periocular inflammation.

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

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## Epos-POS-09

### ACQUIRED PTOSIS IN A CHILD : BEWARE OF INFLAMMATORY ETIOLOGY

#### Abstract Title

ACQUIRED PTOSIS IN A CHILD : BEWARE OF INFLAMMATORY ETIOLOGY

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#### Abstract Type

Case Report

#### Introduction

Introduction: Blepharoptosis is the downward displacement of the upper eyelid caused by a dysfunction of the eyelid elevator. Inflammation is known as one of the etiologies which can occur in children and adult. A thoroughly examination including palpebral examination, radioimaging, laboratory finding is mandatory to determine the diagnosis.

#### Case Illustration

Case Illustration: A twelve year-old boy came to hospital with ten days history of painless right ptosis. Visual acuity was normal on both eyes. Anterior segment, pupils were equal and reactive but there was a restrictive eye movement to right superotemporal gaze without diplopia on the right eye. Ptosis evaluation showed severe right ptosis with horizontal fissure was 0/6mm, MRD1 was 0/1mm, levator function was 0/14mm, eyelid crease 5/5mm, no lagophthalmus, good Bell's phenomenon. Head CT imaging showed nothing in particular. There was elevation in erythrocyte sedimentation rate in laboratory test. We consulted the patient to the pediatric neurology department and was advised 24mg of steroid. Then ptosis resolved, steroid reduced slowly until 8weeks.

#### Discussion

Discussion: Acquired unilateral ptosis in children may indicate serious pathology. Several differential diagnosis include third nerve palsy, myasthenia gravis, orbital infection. To differentiate the cause of ptosis in children based on the history, examination, and result from diagnostic approach to get the right treatment. This patient, after several investigation and steroid administration for the treatment. We concluded that inflammation as the cause of the ptosis.

#### Conclusion

Conclusion: Inflammation can be the cause acquired ptosis in children and get respond very well with steroid administration.

#### Keyword

Keyword: Inflammation, ptosis, children

#### Category

E-Poster

#### Latest Update

August 14, 2020

#### Status

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## Epos-POS-10

### CONRADI-HÜNERMANN SYNDROME: A RARE CAUSE OF CONGENITAL CATARACT

#### Abstract Title

CONRADI-HÜNERMANN SYNDROME: A RARE CAUSE OF CONGENITAL CATARACT

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#### Abstract Type

Case Report

#### Introduction

Congenital cataract is a major cause of visual deprivation, leading to amblyopia and blindness. Approximately 20% of Conradi-Hünemann syndrome/Chondrodysplasia Punctata 2 X-linked Dominant (CDPX2), a rare and not widely known syndrome, has congenital cataracts.

#### Case Illustration

A 3-month-old girl presented with a partial opaque lesion on the left eye lens and left microphthalmos since birth. She could barely fixate and follow to light. B-scan showed normal posterior segments. She had cicatrice alopecia and minor leftovers of ichthyosiform erythroderma. Babygram showed punctate stippled calcification, unilateral rhizomelia, and scoliosis. Echocardiogram revealed patent foramen ovale. She was born spontaneously to a 31-year-old G2P1A0 without any remarkable complication during pregnancy and delivery. There was no known significant family history. Laboratory investigation showed high rubella and CMV IgG, and low 25-OH-vitamin D level. She was planned for cataract extraction surgery.

#### Discussion

CDPX2 is a disorder of final cholesterol biosynthesis due to mutations of emopamil binding protein (EBP) gene affecting the skin, bones, and eyes. Accumulation of 8(9)-cholestenol and 8-dehydrocholesterol affects secondary lens fiber formation in the fifth month of gestation. Embryogenic and inner fetal nucleus were normal, the remaining lens structures have erratic direction of growth and balloon cell formation leading to cataract formation. The mechanism of microphthalmos is still unknown. There was no report of association between rubella or CMV infection and CDPX2. To prevent amblyopia and blindness, cataract extraction should be done before 6 weeks of age.

#### Conclusion

Congenital cataract is rarely caused by CDPX2. Early diagnosis and cataract extraction are essential to prevent blindness.

#### Keyword

Conradi-Hünemann syndrome, CDPX2, congenital cataract

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

Submitted

## Epos-POS-12

### Binocular vision improvement in constant exotropia with fixation alternate

#### Abstract Title

Binocular vision improvement in constant exotropia with fixation alternate

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#### Abstract Type

Case Report

#### Introduction

Constant exotropia is less common than intermittent exotropia. It may be present at birth or may develop from an intermittent exotropia. Onset later in life is associated with loss of vision in one eye. Usually there is limited adduction and stereopsis is lost. A hypertropia may accompany the exotropia. Often, suppression occurs if the condition was acquired by the age 6-8 years, otherwise there is diplopia. Abnormal retinal correspondence is rare if there is suppression. Surgical correction is indicated. An overcorrection is usual since recurrence is common.

#### Case Illustration

A 41 yo woman with squint of both eye since 14 years old. Ophthalmic examination : visual acuity VA RE 20/30 BCVA 20/20 (C -0.75), LE 20/30 BCVA 20/20 (C-0.75). Quantitative squint test exhibited Worth Four Dot Test (WFDT) no fusion and suppression left eye (near and distance), TNO not applicable at plate I (> 2000 sec arc). Qualitative showed, cover test and alternate cover test nasally gaze of RE, Hirschberg test exotropia  $\pm$  15-20° near and distance, Prism test 40 Prism Diopter base in (near), 40 Prism Diopter base in (distance). We performance RE monocular recess 9 mm m.rectus lateral and resect 6 mm m.rectus medial .

#### Discussion

We performance RE monocular recess 9 mm m.rectus lateral and resect 6 mm m.rectus medial . 4 month after surgery, cosmetic performance and fusion was good and improvement binocular vision with TNO at plate VI (60 sec arc)

#### Conclusion

The improvement binocular vision after strabismus surgery

#### Keyword

exotropia, constant exotropia, binocular vision

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-POS-13

### A Challenging Diagnostic In Bilateral Congenital Cataract With Unilateral Microphthalmia, Polycoria, Anterior PHPV And Bilateral Persistent Pupillary Membrane

#### Abstract Title

A Challenging Diagnostic In Bilateral Congenital Cataract With Unilateral Microphthalmia, Polycoria, Anterior PHPV And Bilateral Persistent Pupillary Membrane

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#### Abstract Type

Case Report

#### Introduction

Childhood cataract is one of the most important causes of blindness and severe visual impairment in children. 1 Childhood cataract divided into bilateral and unilateral, certain types of cataract are frequently associated with other ocular and systemic abnormalities. Because of visual deprivation, successful management requires early detection and referral for treatment. 2

#### Case Illustration

A 6-month old with a complaint of whitish on both eyes since birth followed by minimal response to light on both eyes. Eye examination showed clear microcorneas on both eyes followed by sclerocornea in the superior area and embryotoxon in inferior cornea. Persistent pupillary membranes exhibit on both eyes. Brain MRI showed corpus callosum hypoplasia and right globe microphthalmia

#### Discussion

Axenveld-Rieger Syndrome is a bilateral, heterogeneous condition and may include developmental abnormalities in anterior chamber angle, iris, and trabecular meshwork like correctopia, polycoria, ectropion uveae, posterior embryotoxon, and increased intraocular pressure commonly the closest diagnostic in this case. 3 De Morsier Syndrome may show absent septum pellucidum and large ventricles on MRI accomplish the ocular condition.4

#### Conclusion

The closest diagnostic in this case was bilateral congenital cataract with Axenveld Rieger Syndrome and de Morsier Syndrome. A complicated rare case need close observation and multidiscipline managements to provide the best outcome.

#### Keyword

Childhood cataract, Axenveld Rieger Syndrome, De Morsier Syndrome

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-POS-14

### TOTAL HYPHEMA AS ATYPICAL PRESENTATION OF RETINOBLASTOMA

#### Abstract Title

TOTAL HYPHEMA AS ATYPICAL PRESENTATION OF RETINOBLASTOMA

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#### Abstract Type

Case Report

#### Introduction

Retinoblastoma is the most common intraocular malignancy of infancy and childhood, presents with many typical patterns such as leukocoria, strabismus, glaucoma or vision loss. Hyphema is included in the list of atypical presentations of retinoblastoma and is considered among the high-risk clinical predictors in retinoblastoma.

#### Case Illustration

A 4-year-old girl came to our clinic with blind eye presenting as total hyphema on the right eye preceded by leukocoria 6 months ago. On examination under anesthesia, intraocular pressure was 27.2 mmHg. B-scan ultrasonography revealed intraocular calcification expanded to the distal of optic nerve confirmed with computed tomography (CT) scan. Patient was diagnosed with right eye Retinoblastoma Intraoculi Group E treated with primary enucleation followed by adjuvant chemotherapy. Histopathology identified Homer-Wright rosettes and categorized into poorly differentiated retinoblastoma.

#### Discussion

In this patient we found total hyphema with high intraocular pressure, thus ascertain the secondary glaucoma diagnosis. The relatively anterior location of the tumor which did not seem to be attached to the retina on B-scan ultrasonography preceded by leukocoria created suspicion about retinoblastoma initially, especially when the visibility was obscured due to the total hyphema. Occuring symptoms of more than 6 months and patient age older than 24 months predict the highrisk histopathologic features confirmed with the histopathology examination.

#### Conclusion

This paper emphasizes that hyphema is included in the list of atypical presentations of retinoblastoma which can delay diagnosis and usually present with advanced disease. It is important for ophthalmologist to also have knowledge on this atypical presentation.

#### Keyword

Hyphema, Retinoblastoma, Atypical

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-POS-15

### Successful Strabismus Surgery After Orbital Myositis: A Case Report

#### Abstract Title

Successful Strabismus Surgery After Orbital Myositis: A Case Report

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#### Abstract Type

Case Report

#### Introduction

To report a successful strabismus surgery of hypertrophy after orbital myositis.

#### Case Illustration

A 71-year-old male presented with 4 years history of left eye hypertrophy. He had difficulties to perform his daily activities because he had to see with chin down position. He had history of painful left eye associated with swollen inferior palpebra for three months. Ophthalmological examination showed left hypertrophy measuring 45°. Left eye movement was restricted to all direction especially to inferior. Visual acuity was 2/60 due to his cataract. His right eye was non-functional due to history of meningioma. Computed Tomography scan showed enlargement of superior, inferior and medial rectus of left eye. He completed his treatment with methylprednisolone for orbital myositis. His pain was improved but the hypertrophy persisted. He was planned to do strabismus surgery. Intraoperatively, forced duction test revealed a very tight superior and inferior rectus muscle. The surgeon did superior rectus recession (disinsertion) and 6.5 mm inferior rectus resection. One year after surgery, he gained orthophoria.

#### Discussion

Orbital myositis frequently involved superior and medial rectus muscle barely seen through CT scan. If eye deviation persisted at least three months after treatment, strabismus surgery was considered. Intraoperative forced duction test revealed restrictive strabismus due to muscle fibrosis. Fortunately, in this patient, he gained orthophoria one year after surgery. He was also given a course of methylprednisolone after surgery to prevent recurrence.

#### Conclusion

Strabismus surgery should be considered in treating strabismus after full treatment of orbital myositis.

#### Keyword

Hypertrophy, Strabismus, Myositis

#### Category

E-Poster

#### Latest Update

August 16, 2020

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## Epos-POS-16

### VISUAL REHABILITATION AWARENESS AS MANAGEMENT OF BILATERAL POSTERIOR CAPSULE OPACIFICATION: A CASE REPORT

#### Abstract Title

VISUAL REHABILITATION AWARENESS AS MANAGEMENT OF BILATERAL POSTERIOR CAPSULE OPACIFICATION: A CASE REPORT

#### First Author

Romadona

#### Author Institution

Dian Estu Yulia

#### Co Author

#### Abstract Type

Case Report

#### Introduction

Major obstacles in children after cataract surgeries are posterior capsule opacification, increased postoperative inflammation, secondary glaucoma, amblyopia, and visual rehabilitation choices.

#### Case Illustration

A 4-year-old girl presented to RSCM pediatric ophthalmology division with bilateral posterior capsule opacification without spectacles. She underwent cataract surgeries for the right eye and the left eye at ten months old and 12 months old, respectively, without primary posterior capsulotomy. At first examination, there was 15° exotropia, visual acuity of the right eye was 6/60 and 1/60 on the left eye even though PCO at her right eye was thicker than the left eye. Then she was planned to get secondary posterior capsulotomy for both eyes. Her right eye's visual acuity was improved, then she got occlusion therapy to decrease amblyopia for her left eye and spectacles prescription.

#### Discussion

Bilateral posterior capsular opacification that occurred in this patient is the most frequent and common long-term complication of cataract surgery. Secondary posterior capsulotomy in general anesthesia is an option for young children who noncompliant with laser therapy. Once amblyopia has developed, correcting its ocular cause would not restore vision, considerations are visual rehabilitation by using spectacles, even for patients using IOLs, and occlusion therapy.

#### Conclusion

Immediate attempts to manage postoperative complications of PCO after pediatric cataract surgery by removing visual axis opacification, improving amblyopia, and spectacles from the earliest phase will improve the prognosis of patients with pediatric cataract history.

#### Keyword

Posterior capsule opacification, pediatric cataract, visual rehabilitation

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-POS-17

### Post-Surgical Issues Following Unilateral Pediatric Cataract Surgery: A Case Report

#### Abstract Title

Post-Surgical Issues Following Unilateral Pediatric Cataract Surgery: A Case Report

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#### Abstract Type

Case Report

#### Introduction

Post-surgical issues in pediatric cataract surgery such as Posterior Capsule Opacification (PCO) and the choices of visual rehabilitation are still much discussed compared to adults.

#### Case Illustration

A 4 year old girl presented with PCO of the right eye with history of unilateral congenital cataract surgery with Intraocular Lens implantation 2 years ago at another hospital in Jakarta. Her right eye visual acuity was 3/60 and 6/7.5 for the left eye. We performed secondary posterior capsulotomy of the right eye. Following the procedure the patient did not regain her vision, thus a diagnosis of deprivation amblyopia was made. She was then prescribed occlusion therapy to decrease amblyopia of her right eye.

#### Discussion

PCO is one of the most common complications that occur in pediatric cataract surgery. Unilateral congenital cataract is associated with worse visual outcome compared to bilateral cataracts. Even with early removal of the cataract itself, if we fail to manage the complication that follows like PCO, deprivation amblyopia may develop. It is one of the most feared complications, as it is known to be the most refractory to treatment. These facts must be taken into account in managing PCO in children, therefore immediate removal of PCO and an optimal visual rehabilitation is needed to improve visual outcome prognosis of the patient.

#### Conclusion

Early identification and management of pediatric cataract surgery complications combined with optimal visual rehabilitation may benefit the patient in the long run. If not treated properly, especially in unilateral cataract cases, it may be too late to regain visual function.

#### Keyword

Posterior capsule opacification, pediatric cataract, deprivation amblyopia

#### Category

E-Poster

#### Latest Update

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## Epos-POS-18

### PATIENTS WITH ACCOMMODATIVE ESOTROPIA

#### Abstract Title

PATIENTS WITH ACCOMMODATIVE ESOTROPIA

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#### Abstract Type

Case Report

#### Introduction

Accommodative esotropia is a condition where in excessive effort of accommodation result in an inward deviation of the eyes. Most often it is caused by uncorrected hypermetropia. Acquired esotropia in a visually immature child is a day time emergency. The consequences are loss of binocular vision and onset of amblyopia. The interval between the time of onset and the treatment determines the visual outcome.

#### Case Illustration

Patient was diagnosed with accommodative esotropia and bilateral hypermetropia. With the following examination results: 20 degree esotropia ocular position. Objective refractive correction: spherical +2.00 diopters.

#### Discussion

Records of patients with accommodative esotropia in M Djamil Hospital. Case 1 was a 8 month old woman, with accommodative esotropia both of eye due to uncorrected hypermetropia. Deviation examination was found 30 Base Out (BO). This patient was given refractive correction therapy with spherical +2.00 diopters for 3 months. 3 months later, during a re-examination, it was found that the ocular returned to normal position (orthophoria). refraction examination was performed, and the results found no refractive error. The refraction examination that we did is an objective refraction examination.

#### Conclusion

The accommodative esotropia must obtain maximum refraction correction so that binocular vision and ocular position can return to normal. In the management, the child must wear corrective glasses at all times. If not, the child will not relax the accommodation and their visual acuity worsens.

#### Keyword

Accommodative esotropia, refraction correction, objective refraction

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-POS-19

### OCULAR SYPHILIS ON THE RISE: A CASE REPORT

#### Abstract Title

OCULAR SYPHILIS ON THE RISE: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Rise on syphilis incidence is a matter of concern in today's health world. We will present one new case of mixed ocular syphilis with cytomegalovirus in an HIV positive patient

#### Case Illustration

Male, 48 years old, with bilateral blurring of vision for five months, accompanied by redness of both eyes, fever, oral thrush and skin rashes both in plantar region. The patient was HIV positive with multiple male sex with male behavior. Examination revealed panuveitis characteristic of both eyes. The serologic test results were negative at the beginning but turns to be reactive after diluting the titration fold. The patient received therapy based on the syphilis guideline, topical medication (atropine sulphate & prednisolone acetate), and ganciclovir due to the CMV positive result. There was an occurrence of Jarisch-Herxheimer reaction but managed properly. The visual acuity improved from light perception OU to 6/60 OD and 6/18 OS

#### Discussion

Syphilis can mimic other types of diseases so we must be more thorough when performing the examination. Treatment can be given following the guidelines and make additional therapy from a positive examination result. However, we must also be aware of the prozone effect and Jarisch-Herxheimer reaction that may arise. Ocular syphilis as one of the syphilis manifestation, also have a good result when treated properly.

#### Conclusion

There is a strong connection between the rise of syphilis and lifestyle trends today. Syphilis is a complex disease, but with a strong knowledge based on proper examination and treatment, it will produce a good outcome.

#### Keyword

Ocular syphilis, prozone effect, Jarisch-Herxheimer reaction

#### Category

E-Poster

#### Latest Update

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#### Status

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## Epos-POS-20

### CHARACTERISTICS OF REFRACTIVE AMBLYOPIA IN CHILDREN AT MATRAMAN REGIONAL GENERAL HOSPITAL PERIOD JANUARY-DECEMBER 2019

#### Abstract Title

CHARACTERISTICS OF REFRACTIVE AMBLYOPIA IN CHILDREN AT MATRAMAN REGIONAL GENERAL HOSPITAL PERIOD JANUARY-DECEMBER 2019

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#### Abstract Type

Research

#### Introduction & Objective

Amblyopia is one of the leading cause of visual impairment in children. Refractive amblyopia is the most common type of amblyopia. World Health Organization (WHO) estimates 19 million children are visually impaired; of those, 12 million are impaired due to uncorrected refractive errors and amblyopia. The objective of this study was to describe the characteristics of refractive amblyopia in children at Matraman Regional General Hospital

#### Method

This study was a descriptive retrospective study with cross-sectional design. Data were collected from medical records of children patients with refractive amblyopia using total sampling method during the period of January to December 2019. The data included age, gender, type of refractive error, and visual acuity

#### Result

A total of 42 patients were included in this study, which consisted of 26 female children (61.9%) and 16 male children (38.1%). Most of them were in the age group of 4-9 years old (64.3%). Based on the type of refractive error, there were 26 children with myopic astigmatism (61.9%), 8 children with astigmatism (19%), 6 children with myopia (14.3%), and 2 children with hypermetropia (4.8%). Uncorrected visual acuity examination had been done to all patients, more than 70% had visual acuity 6/18-6/60 and after corrected, more than 80% had visual acuity >6/18.

#### Conclusion

In this study, refractive amblyopia was more common during childhood stage. Implementation of visual screening in children is recommended for early detection and proper management of amblyopia to prevents visual impairment in the future.

#### Keyword

amblyopia, children, refractive error

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-REF-01

### SCLERAL LENS AS A TREATMENT OF CHOICE IN TREATING KERATOCONUS – A CASE REPORT

#### Abstract Title

SCLERAL LENS AS A TREATMENT OF CHOICE IN TREATING KERATOCONUS – A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Keratoconus is common disorder which central or paracentral cornea undergoes progressive thinning and bulging, Resulting in cone-shaped cornea and affects 1 per 2000 cases worldwide. Various modalities have been developed to produce better visual outcome and comfortability.

#### Case Illustration

A twenty-three-year-old man was referred due to difficulties in refraction for both eyes and has changed glasses but never got the right power. Patients with history of rubbing his eyes since childhood. Visual acuity (VA) on the right eye was 6/9 pin hole (PH) 6/7.5 and left eye 6/12 PH 6/9 with error autorefraction Result in both eyes. Topographic examination was performed and showed irregular bow tie images with central keratometry was 57.94 D on the right eye and 53.56 D on the left eye. The Patient was classified as moderate stage keratoconus and was prescribed scleral contact lenses with power S-3.25, base curve (BC) 8.00 / 42.19 for the right eye with 216 µm tear layer clearance and S + 0.75 with BC 8.50 / 39.71 for the left eye with tear layer clearance 195 µm and the VA became 6/6 on both eye with comfortable outcome.

#### Discussion

Wide spectrum of treatment options are available to correct keratoconus. There have been many studies reporting scleral lenses have more advantages in treating moderate-severe stage keratoconus which produce dramatic improvement in vision and satisfaction, yet delaying the need of corneal-cross-linking in limited facilities centers.

#### Conclusion

Scleral contact lens is a promising modality for treating keratoconus and its refractive error with excellent visual outcome and satisfactory.

#### Keyword

scleral lens, keratoconus, topography

#### Category

E-Poster

#### Latest Update

August 11, 2020

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## Epos-REF-02

### Effects of Prolonged Digital Screen Time towards Visual Acuity on Patients wearing Overnight Orthokeratology lenses.

#### Abstract Title

Effects of Prolonged Digital Screen Time towards Visual Acuity on Patients wearing Overnight Orthokeratology lenses.

#### Abstract Type

Case Report

#### Introduction

Overnight Orthokeratology (O-k lenses) lenses are becoming increasingly popular for myopic reduction in many parts of the world. Recent studies have shown the treatment to be effective for slowing the progress of myopia, and this is likely to increase the use of ortho-k. However, the use of Digital Screen Time (DST) has also increased during the covid19 pandemic, this condition influence the wearing time of the O-K lenses, due to the increase duration in front of computer, mobile phone or tablet.

#### Case Illustration

Case Illustration A 14-year male patient presented at the clinic July 8, 2020, with the chief complaint blurry vision. He is the only child in the family. The glasses (since 1.5 year ago): OD -500 C -100 x 5o gained 0.7; OS -500 C-100x 170o gained 0.7. It was performed comprehensive eyes examination, including corneal mapping every visit. Follow up schedule: once a week. Autorefraction: OD S-5.50 C-1.00 x 180o; OS S-6.25 C- 1.50x 156o. VOD 1.5/60 corr S-5.50 C-1.00x180o gained 1.0; VOS 1.5/60 corr S-6.00xC-1.25 x155o gained 1.0. The K reading OD K: 7.90 mm; k: 7.60 mm; OS K: 8.00 mm; k: 7.60 mm. IOP ODS: 14 mmHg (Schiotz). ODS funduscopy were normal. He was fitted with initial OK lenses OD RF 500 BC 900; OS RF 500 BC 9.12 wearing for one week, then given him training and education. July 13 2020 follows up, VOD: 0.4; VOS 0.3. Perform comprehensive eye examinations, corneal mapping. The next lenses OD 600 BC 925; OS RF 650 BC 9.38 July 18 2020 follow up, VOD 1.0; VOS 0.9 July 24 2020 follow up VOD 1.0 VOS 1.0 July 29 2020 follows up VOD 0.5 VOS 0.3. His mother told that he has 3 smartphone, everyday he usually play games with his friends, go to bed lately. Again, given him education especially about the effect of DST cause reduced wearing time. August 4 2020 VOD 0.9; VOS 0.9. August 13, 2020. VOD 1.0; VOS 1.0

#### Discussion

The fundamental requirement for starting wearing O-k lenses is to have proper education in this area not only about hygiene, inserting lenses at night and removing them in the morning, but also about the potential environmental risk factor. The education and the near work have played major roles in the rise in myopia rates even before the Introduction of digital device. Then during the covid 19 pandemic, remarking the ways we work, that increase duration in front of computer, mobile device a, tablet, inevitably affects the eyes. The patient has 4 smartphone, his activity in social media influence his visual acuity. DST has been cited as a potential modifiable environmental risk factor that can increase higher myopia risk. However, associations between screen time and myopia have not been consistently, but some governments issue a notice among children and adolescent by limiting the DST for mobile devices, computer, and consoles. After giving education at each visit, also his strong motivation, he has got best VA. Further studies with objective screen time measurements are necessary to assess evidence of an association between screen time and myopia. There is a strong relation between more time outdoors and less myopia. Outdoor activity remains the most important modifiable risk factor for myopia onset. Spending time outside is thus good for children's eyes, their cardiovascular system, and their weight.

#### Conclusion

The patients have the benefit of wearing O-k lenses; the visions are better and stable. Given the increase of myopia worldwide, consideration to limiting screen time in children may be prudent

#### Keyword

. Ortho-k lenses, myopia, digital screen time

#### Category

E-Poster

### Epos-REF-03

## REFRACTIVE MANAGEMENT OF NEGLECTED EXTREME HIGH AXIAL MYOPIA WITH AMBLYOPIA ANISOMETROPIA AFTER MONOCULAR CATARACT SURGERY

#### Abstract Title

REFRACTIVE MANAGEMENT OF NEGLECTED EXTREME HIGH AXIAL MYOPIA WITH AMBLYOPIA ANISOMETROPIA AFTER MONOCULAR CATARACT SURGERY

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#### Abstract Type

Case Report

#### Introduction

The prevalence of myopia increases globally at an alarming rate with significant increases in the risks for vision impairment from other pathological disorders. High axial myopia was the commonest cause followed by anisometropic amblyopia that may caused serious social and economic consequences.

#### Case Illustration

A 59-years-old male with complaint blurred vision on his right eye. He had a history of blurred vision since child and no treatments have obtained. Visual acuity of right eye was 1/60 cc S-23.75 C-3.00 A70° became 4/60. Visual acuity of left eye was 6/6. Hirschberg showed orthophoria, immature cataract on right eye, sectoral iris atrophy and pseudophakic on left eye, axial length 32,23 mm on right eye and 28,17 mm on left eye, and bilateral pathologic myopia. With RGP lens, visual acuity improve 6/24 f-1 and with soft contact lens, visual acuity improve 6/40.

#### Discussion

Contact lenses for anisometropic amblyopia by minimizing aniseikonia to improve functional level of binocular vision. RGP lenses have small and individualized diameter, offer excellent vision, and durability but discomfort need adaptation time. Soft contact lenses have large diameter, higher level of comfort, but poorly mask astigmatism. This patient decides to use RGP lens because vision is better and he has been educated about RGP adaptation.

#### Conclusion

Refractive management is a good therapeutic choice for neglected extreme high axial myopia with amblyopia

***anisometropia when surgical intervention cannot provide promising Result. Prescribing RGP and soft contact lens can***

improve visual acuity and the quality of life of patient.

#### Keyword

rigid gas permeable lens, soft contact lens, high axial myopia

#### Category

E-Poster

#### Latest Update

August 15, 2020

#### Status

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### Epos-REF-04

## Pseudomyopia or 'True' High Myopia? How to Diagnose: A Case Series

#### Abstract Title

Pseudomyopia or 'True' High Myopia? How to Diagnose: A Case Series

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#### Abstract Type

Case Report

#### Introduction

Pseudomyopia refers to a typically intermittent and temporary shift of refraction towards myopia. It Results from spasm of accommodation and accommodative excess. This study aimed to report 6 children with pseudomyopia and to highlight the importance of cycloplegic refraction in children with myopia.

#### Case Illustration

Six children, aged 7-13 years, presented with complaints of blurring of vision and asthenopic symptoms. Before cycloplegic was employed, autorefractometer (AR) showed high myopia in 5 out of 6 patients which tended to decrease when best-corrected visual acuity (BCVA) was performed. AR repeated after cycloplegic revealed reduction in spherical dioptic. From T-test, there was a significant difference between the AR Results before and under cycloplegia (p

#### Discussion

From history-taking and the Results of before and after dilated AR and BCVA, 6 patients were diagnosed as pseudomyopia. Naturally, the condition is restricted to age groups in which the accommodation is active. The most probable factor of pseudomyopia was psychogenic as revealed by case histories. Pseudomyopia is usually treated with cycloplegic eye drops and bifocal lenses, but the compliance of the patient and the blurred near vision could be problematic. Vision training and minus or plus lenses remain the main option to improve the visual symptoms.

#### Conclusion

Cycloplegic refraction is substantial to perform in children with moderate to high myopia. Orthoptic training and spectacle correction are the most convenient methods to manage pseudomyopia.

#### Keyword

accommodation spasms, cycloplegic, children, pseudomyopia

#### Category

E-Poster

#### Latest Update

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## Epos-REF-05

### MANAGEMENT OF HIGH ANISOMETROPIA MIOPIA ASTIGMATISM COMPOSITUS WITH SOFT CONTACT LENS

#### Abstract Title

MANAGEMENT OF HIGH ANISOMETROPIA MIOPIA ASTIGMATISM COMPOSITUS WITH SOFT CONTACT LENS

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#### Abstract Type

Case Report

#### Introduction

Refractive Abnormalities is the most common eye disorders. Anisometropia requires refractive correction and in anisometropia using contact lens is better than spectacles because can minimize the differences image size receive by retina.

#### Case Illustration

A 16 Y.O. male with blurry vision on the both eyes since 4 years ago. VOD 3/60 PH 6/30, VOS 6/18 PH 6/12. BCVA OD: S -12.00 C - 1.00  $\alpha$  100  $\rightarrow$  6/15 BCVA OS : S -3.00 C - 1.00  $\alpha$  00  $\rightarrow$  6/6 F(2). Binocular 6/7,5 (dizzy, uncomfortable). Patients recommended to use soft contact lenses (SCL). Several examinations were carried out: Horizontal Visible Iris Diameter (HVID), tightness of the lid, blink rate, schirmer's test, and tear break up time. The power of soft contact lens are: OD with Spheris Equivalent (SE) = -12.50 D then adjustments based on vertex distance = S-10,64 D  $\rightarrow$  VOD 6/7,5. OS with SE= -3.50 D  $\rightarrow$  VOS 6/6. Binocular 6/6 (comfortable).

#### Discussion

Patient already wore glasses but patient felt dizzy because of high differences of image size Result problem in binocular vision. The use of SCL reduce the change of image size. The advantages of soft contact lenses are: comfortable, a short period of adaptation, easy to use, minimal contact lens dislocation, and can be used temporarily.

#### Conclusion

Case of high anisometropia astigmat myopia compositus which still feels blurred and dizzy when wearing spectacles **treat by SCL Result maximum vision and the patient feels comfortable.**

#### Keyword

Soft contact lens, high anisometropia, astigmat myopia compositus.

#### Category

E-Poster

#### Latest Update

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## Epos-REF-06

### Contact Lens Deposit in Children Patients With Rigid Contact Lens

#### Abstract Title

Contact Lens Deposit in Children Patients With Rigid Contact Lens

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#### Abstract Type

Case Report

#### Introduction

Deposits in Rigid Gas Permeable Contact Lense (RGP CL) is one of complications in the contact lens usage and it can be worsen by poor maintenance of the lens. The deposit can be a risk factor for corneal infection or inflammation starting from corneal erosion to severe corneal ulcer. Deposits in the central area of the optic can cause decreased visual acuity and blurry vision

#### Case Illustration

Two patients with RGP CL come to eye clinic of M Djamil Hospital Padang. First patient is a 10 year old boy with blurry vision of the left eye since 15 days ago. The patient has been wearing RGP CL in the left eye since 8 months ago. Patient has history of not cleaning the RGP lens regularly every week. Second patient is a 14 year old girl complaining blurry vision of the left eye since one month ago. Patient has history of cleaning the RGP CL with soft contact lens solution. There is no complain of red eye in both patient.

#### Discussion

After cleaning the RGP CL with cleansing solution, protein remover and multipurpose solution for about 30 minutes, BCVA is improving in both patients.

#### Conclusion

**Deposits in the RGP CL can decrease visual acuity. Formation of deposits is a Result of poor maintenance of the CL.**

Education and parents role is very essential in preventing formation of deposits in the RGP CL.

#### Keyword

contact lens deposits, rigid gas permeable contact lens, contact lens in children

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

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## Epos-REF-07

### Corneoscleral Cyst-induced Astigmatism: A Rare Case and Its Management

#### Abstract Title

Corneoscleral Cyst-induced Astigmatism: A Rare Case and Its Management

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#### Abstract Type

Case Report

#### Introduction

To describe a case of corneoscleral cyst-induced astigmatism and its management.

#### Case Illustration

A 15-year-old boy with a chief complaint of increasingly blurred vision and white spot at the center of the eye came to the outpatient clinic. Patient had a history of penetrating corneal trauma and cataract extraction 5 years before presentation. High degree of astigmatism and hyperopia was found. Slit lamp examination followed with ancillary test was performed and the cyst was found during anterior optical coherence tomography examination. Aphakia and corneoscleral cyst were assumed to be the cause of refractive error. The cyst was incised and irrigated using balanced salt solution through limbal incision under general anesthesia.

#### Discussion

Post-operative follow-ups showed improving vision with no sign of recurrences was documented within 2 months of follow-up. However, due to still unstable visual acuity, longer follow-ups are needed before prescribing rigid gas permeable contact lens.

#### Conclusion

This minimally invasive surgical approach followed by plan of giving rigid gas permeable contact lens may be a good alternative to young post-trauma patients with aphakia and corneoscleral cyst-induced astigmatism.

#### Keyword

Astigmatism, cyst, corneoscleral cyst, rigid gas permeable contact lens

#### Category

Free Paper Presentation

#### Latest Update

August 16, 2020

#### Status

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## Epos-REF-08

### OPTICAL AND PHARMACOLOGICAL STRATEGIES OF MYOPIA CONTROL: A SYSTEMATIC REVIEW

#### Abstract Title

OPTICAL AND PHARMACOLOGICAL STRATEGIES OF MYOPIA CONTROL: A SYSTEMATIC REVIEW

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#### Abstract Type

Research

#### Introduction & Objective

Myopia is one of the leading causes of vision loss. The prevalence of myopia has increased in recent decades. Several strategies of myopia control have been reported, and showed different Results in SE and AL progression. This article is intended to review studies about optical and pharmacological control of myopia in children.

#### Method

A Systematic Review was conducted by looking up the Keyword "optical and pharmacological strategies" and "myopia control" in PubMed, MEDLINE and Cochrane. We included all original manuscripts published from 2001-2019. Randomized controlled trials (RCTs) was identified that compared Progressive Addition Lenses (PAL) spectacle, Soft Contact Lenses (SCL), Orthokeratology (OK), Pirenzepine and Atropine in myopia control.

#### Result

Fifteen RCT studies were included with a total of 2465 children aged between 4-18. PAL spectacle showed insignificant treatment effect (Reduction rate in Spherical Equivalent (SE): 14-15%). SCL showed different changes on different lens types (SE: 25-72%, Axial Length (AL): 32-79%). OK had stronger effect than SCL and spectacle (AL: 43%). From the pharmacological control, Pirenzepine 2% reported some effectiveness (SE: 42-44%, AL: 30-39%). Low dose atropine (0.01%) had better long-term control and less rebound effect than high dose atropine (SE: 60%). The combination of OK and atropine 0.01% was observed and showed a better Result than monotherapy with OK (AL: 53%).

#### Conclusion

Low dose atropine (0.01%) is the most effective strategy to control myopia with the lowest rebound effect, and minimal side effect. Still, the combination of optical and pharmacological control has been reported as more potential therapy than a single therapy.

#### Keyword

myopia control; optical strategies; pharmacological strategies

#### Category

E-Poster

#### Latest Update

August 04, 2020

#### Status

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## Epos-REF-09

### CHARACTERISTIC OF REFRACTIVE DISORDERS IN GMIM BETHESDA HOSPITAL TOMOHON FROM JANUARY 2019 TO JUNE 2020

#### Abstract Title

CHARACTERISTIC OF REFRACTIVE DISORDERS IN GMIM BETHESDA HOSPITAL TOMOHON FROM JANUARY 2019 TO JUNE 2020

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#### Abstract Type

Research

#### Introduction & Objective

Vision 2020 is launched as a global initiative that aims to eliminate the main causes of blindness, such as refractive disorders. According to Riskesdas 2013, the prevalence of refractive disorder in Indonesia is 4,6% which still considered remarkably high. Therefore, refractive disorders are still a problem in Indonesia. The aim of this study is providing characteristic of refractive disorders of outpatient eye clinic in GMIM Bethesda Hospital Tomohon from January 2019 to June 2020.

#### Method

This is a retrospective descriptive study. Data were collected from patient's medical records.

#### Result

This study included 2.235 patients in which 26,8% are men, 73,2% are women. Most of patients are aged 51-60 years (19,3%). Based on place of residence, 38,3% patients live outside Tomohon, 411 (18,4%) patients live in Tomohon which mostly from South Tomohon. The most common diagnosis is myopia 45,7% included 38,7% mild, 6,1% moderate, and 0,9% severe. In 486 patients, 13,2% diagnosed as simple myopic astigmatism, 8,5% as compound myopic astigmatism, and 0,09% as mixed astigmatism. In addition, 727 patients were diagnosed as hypermetropia. Refractive disorders also happened bilaterally in 67,9%. Most commonly 60,3% complaint is blurred vision.

#### Conclusion

Most patients with refractive disorders in this study are women, aged 51-60 years, live outside Tomohon. Most common diagnosis is mild myopia which happen bilaterally in almost all patients. Blurred vision is the most common complaint.

#### Keyword

Refractive disorder, Characteristic

#### Category

E-Poster

#### Latest Update

August 14, 2020

#### Status

Submitted

## Epos-REF-10

### OCULAR PHYSIOLOGICAL CHANGE DURING PREGNANCY AND POSTPARTUM : A SYSTEMIC REVIEW

#### Abstract Title

OCULAR PHYSIOLOGICAL CHANGE DURING PREGNANCY AND POSTPARTUM : A SYSTEMIC REVIEW

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#### Abstract Type

Research

#### Introduction & Objective

Pregnancy induced hormonal changes in the body and the eyes are no exception. These ocular changes could be physiologic, pathologic or a modification of a pre-existing condition. Changes in intraocular pressure (IOP), visual acuity (VA) and refractive error (RE) are part of the physiological changes that may occur during pregnancy.

#### Method

This systematic review was performed by searching on Pubmed. Full text paper that include healthy pregnant woman with or without refractive error as a subjects, without comorbid such as metabolic disease and without ocular pathologies such as glaucoma. Patient monitored in each trimesters and 6 weeks after delivery.

#### Result

We identified several studies consist of cohort and cross sectional, from with total number of 407 subjects. From cohort studies we found that significant fall in intraocular pressure (IOP), but not significantly in refractive error and visual acuity. Meanwhile other studies Result significantly in refractive error and visual acuity between the trimester but not significant between the early pregnancy and postpartum period.

#### Conclusion

Both of the studies suggest the ocular alteration during pregnancy can be caused by hormonal changes during period. Most of the participants resumed their normal visual acuity after delivery. Further research with larger sample is needed to investigate the other factor causality of visual disturbance during pregnancy for better management.

#### Keyword

Ocular, Pregnancy, Refraction

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Submitted

## Epos-REF-11

### Clinical Profile of Pediatric Patients with Low Vision in Refraction Division Ophthalmology Department Cipto Mangunkusumo Hospital

#### Abstract Title

Clinical Profile of Pediatric Patients with Low Vision in Refraction Division Ophthalmology Department Cipto Mangunkusumo Hospital

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#### Abstract Type

Research

#### Introduction & Objective

Childhood low vision can affect many aspects regarding the child's development, therefore, it is important to maximize the child's functional vision, one of which is by using low vision aids. The purpose of this study is to present the characteristics among pediatric patients who carry out follow-up visits in Low Vision Clinic, Cipto Mangunkusumo Hospital during 4 years period.

#### Method

This is a retrospective descriptive study of pediatric patients aged 0-17 years old who carry out follow-up visits recorded in the refractionist logbook and patients medical record in Low Vision Clinic from January 2016 to March 2020.

#### Result

A total of 72 patients were analyzed, the majority were males, 42 (58.3%). The majority of the patients were a group of 0-5 years old (61.1%). Brain abnormalities (29.2%) were the most common cause of low vision in children. Among 32 patients eligible for best corrected visual acuity (BCVA) measurement, 46.9% were identified as having a moderate visual impairment. Eighteen patients were prescribed for Low Vision aids, but only 3 patients carried out follow-up visits to investigate the BCVA after Low Vision aids usage.

#### Conclusion

Of all the patients following up, not all of them prescribed with low vision aids use or purchase those low vision aids. The rationale behind it needs to be examined further or more thoroughly.

#### Keyword

low vision, pediatric, characteristics

#### Category

E-Poster

#### Latest Update

August 16, 2020

#### Status

Approved As E-Poster

## Epos-ROO-01

### Venous Malformation in 11 Year Old Girl

#### Abstract Title

Venous Malformation in 11 Year Old Girl

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#### Abstract Type

Case Report

#### Introduction

Venous malformations are slow-flow vascular anomalies. There are some types of venous malformation that can be divided into simple, sporadic or familial, combined or syndromic. They are present at birth and symptomatic, causing morbidity and pain. Venous malformations can masquerade as hemangioma and another ocular conditions that can delay diagnosis and treatment.

#### Case Illustration

An 11-y.o girl referred by a neurosurgeon with double vision and progressed proptosis for 6 months. The right eye looked red and proptosis. BCVA for right eye is 3/60 and 20/20 for left eye. Through the physical examination, there was proptosis with subconjunctival hemorrhage, limitation of extraocular muscle movement to all direction and there was RAPD Gr 3. Funduscopy examination revealed oedema papil The head MRI examination showed a retroorbital mass on right eye. She got orbitotomy removal tumor and treated with methylprednisolone for 12 days. Visual Acuity after mass removal improved to 0.15 (uncorrected) The mass was examined by anatomical pathologist and showed venous malformation.

#### Discussion

Through history taking and physical examination seems hard to differentiate between hemangioma and venous malformation. Sometimes, detail history taking can give us clue to considerate the closest diagnosis. Hemangioma usually appear at or shortly after birth. Beside that, venous malformation can be inherited. To choose the right diagnosis, radiology examination like MRI examination also needed

#### Conclusion

This case showed that sometimes we have to overdiagnosed patients so that we can early diagnose and treat properly for the better prognosis and visual acuity

#### Keyword

Venous Malformation, Arteriovenous Malformation, Hematom Palpebra, Proptosis

#### Category

E-Poster

#### Latest Update

July 21, 2020

#### Status

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## Epos-ROO-02

### MANAGEMENT OF MEDIUM TO EXTENSIVE CONGENITAL EYELID COLOBOMAS; A CASE SERIES

#### Abstract Title

MANAGEMENT OF MEDIUM TO EXTENSIVE CONGENITAL EYELID COLOBOMAS; A CASE SERIES

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#### Abstract Type

Case Report

#### Introduction

Eyelid colobomas are full thickness defect of the eyelid margin that Result from derailed or incomplete cell migration in embryogenesis. The goal of the treatment is to restore the normal anatomy, functional and cosmetic appearance of the patient. The wider defect the more complicated management that must be done.

#### Case Illustration

We managed 4 patient aged between 6 months and 25 years .Case1. A 6-month-old girl with bilateral upper eyelid colobomas. The defect was 50% in size with small symblepharon managed with direct closure with lateral cantotomy. Case2. A 25-years-old man with bilateral upper eyelid colobomas that have been reconstructed before, extensive symblepharon, and keratopathy managed with direct closure with lateral cantotomy. Case3. A 16-years-old man with keratopathy due to extensive unilateral upper eyelid coloboma managed with Cuttler Beard flap technique with ear cartilage. Case4. A 7-month-old-boy with medium bilateral upper eyelid colobomas managed with Tenzel semicircular flap.

#### Discussion

Medium to large eyelid coloboma represent a management challenge. A corneal exposure and ulceration are complications that usually found. Therefore repair is often urgent, there is no time to wait for maturation of potential skin graft sites or increased tissue laxity. The Result was good in all patient with vitality of all flaps, absent in infections and seromas, good in cosmetics, and all patient were satisfied with final Results.

#### Conclusion

There are various technique available for reconstruction of eyelid coloboma based on its size, a corneal clarity, a visual prognosis of the patients . A proper management of it is very important for excellent Results.

#### Keyword

Eyelid colobomas, management, surgical technique

#### Category

Free Paper Presentation

#### Latest Update

August 01, 2020

#### Status

Submitted

## Epos-ROO-04

### Cutler Beard Reconstruction Techniques after Tumor Excision: A Case Report

#### Abstract Title

Cutler Beard Reconstruction Techniques after Tumor Excision: A Case Report

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#### Abstract Type

Case Report

#### Introduction

Eyelid defects require proper closure to maintain eye function and appearance. Cutler-Beard flap is useful for reconstructing large upper eyelid defects, especially located in the middle and usually defects of more than 70% which require improvement using the lower eyelid. One of the most common causes of eyelid defects is the Result of neoplastic surgical excision

#### Case Illustration

A 63-year-old woman with a complaint of a lump in the right upper eyelid and getting bigger like red bean seeds with yellowish white colored, irregular surface, immobile, solid consistency, firm boundary with a size of 14x4x0.7 mm and no tenderness. Histopatology examination revealed Sebaceous Gland Carcinoma and treated with wide excision, Vries Coupe and after the margin was free from tumor, the defect was reconstructed with the Cutler Beard technique. After 5 weeks post surgery the patient performed a flap release using the cutler beard stage II technique

#### Discussion

Cutler Beard begins by making a marker at 4mm below the inferior margo extending to the size of the defect. Palpebra skin marked by a marker and then incised layer by layer. These eyelids are placed under the bridge of the lower eyelid and then sutured to the upper eyelid defect. At week 5 it was found no signs of inflammation so the patient planned to release the flap with Cutler Beard Stage II

#### Conclusion

Eyelid reconstruction using the Cutler Beards technique can be recommended for central palpebra superior defects of medium to large size

#### Keyword

Cutler Beard, Eyelid Reconstruction

#### Category

E-Poster

#### Latest Update

August 05, 2020

#### Status

Submitted

## Epos-ROO-05

### Ocular Surface Reconstruction and Visual Acuity Restoration in Ocular Cicatricial Pemphigoid – One-Step Surgical Approach

#### Abstract Title

Ocular Surface Reconstruction and Visual Acuity Restoration in Ocular Cicatricial Pemphigoid – One-Step Surgical Approach

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#### Abstract Type

Case Report

#### Introduction

Ocular cicatricial pemphigoid (OCP) is an inflammatory disease involves eyes with various alterations of the ocular surface, such as symblepharon, entropion, conjunctival inflammation, and corneal neovascularization. This report aim to demonstrate a successful outcome of ocular surface reconstruction in OCP with release symblepharon using wet amnion membrane transplantation combine with optical

#### Case Illustration

A-47 years old woman, complained blurred vision, redness, and irritation on both eyes since 5 years ago. Visual acuity was decrease gradually led to light perception on both eyes. She has a history of multiple ocular surface surgeries and end up with severe conjunctivalization, corneal opacification and severe symblepharon in all quadrants. The patient underwent release symblepharon, upper and lower fornix reconstruction using wet amnion membrane, followed with optical keratoplasty. Seven weeks after surgery visual acuity gradually improved to 6/24, conjunctival showing a complete epithelization in all quadrants with deep fornix, inflammation reduced significantly and corneal graft was remained clear.

#### Discussion

In severe stages of the disease, patients may need mucous membrane autograft or amniotic membrane transplants for fornix reconstruction. In this case patient underwent release symblepharon using wet amnion membrane transplantation combine with optical keratoplasty, one step surgical approach preferred to avoid repeat inflammation due to multiple surgery and to give patient comfort.

#### Conclusion

One-step surgical approach consisting of release severe symblepharon, fornix reconstruction with wet amnion membrane and keratoplasty showed successful Result in restoring severe ocular surface problem and visual acuity in OCP.

#### Keyword

Ocular cicatricial pemphigoid, symblepharon surgery, amnion membrane transplantation, keratoplasty, ocular surface reconstruction.

#### Category

E-Poster

#### Latest Update

August 05, 2020

#### Status

Submitted

## Epos-ROO-06

### A CASE REPORT : ORBITAL LYMPHOMA RESEMBLING ORBITAL CELLULITIS: DIAGNOSTIC APPROACH

#### Abstract Title

A CASE REPORT : ORBITAL LYMPHOMA RESEMBLING ORBITAL CELLULITIS: DIAGNOSTIC APPROACH

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#### Abstract Type

Case Report

#### Introduction

Orbital lymphoma is a localized form of lymphoma affecting the orbit, the lacrimal gland, the lids and or the conjunctiva. Lymphomas of the orbit and orbital adnexa are rare tumors, comprising only 8% of all extra-nodal lymphomas. Those affected are typically older individuals. The condition may be primary or secondary and involving one or both orbits. Orbital cellulitis is an inflammation of the soft tissues of the eye socket behind the orbital septum, a thin tissue which divides the eyelid from the eye socket.

#### Case Illustration

A 55-years-old woman was admitted to hospital with swelling in the left periorbital region that was erythematous and painful. Decrease of vision and Proptosis is slightly present. Visual acuity of left eye was 1/60. Restricted ocular motility and RAPD was present on the left eye. CT scan and pathology examination had been performed and the Result was non Hodgkin lymphoma.

#### Discussion

Orbital inflammation can occur from response to an orbital condition rather than being a primary orbital inflammatory disease, such triggering conditions include orbital tumors. The presence of the acute orbital symptoms in this case is more likely secondary to the lymphoma. Lymphoproliferative lesion can have a variable degree of inflammatory sign. It can resemble the manifestation of orbital cellulitis that masquerade the existence of orbital lymphoma

#### Conclusion

Orbital lymphoma is a rare clinical entity with various clinical presentation that may resemble or overlap with other disease such as orbital cellulitis. In this case orbital cellulitis may masquerade the orbital lymphoma, as clinical presentation show a typical manifestation.

#### Keyword

orbital – lymphoma – cellulitis

#### Category

Free Paper Presentation

#### Latest Update

August 07, 2020

#### Status

Submitted

## Epos-ROO-07

### LIP MUCOUS GRAFT IN IRRITATIVE PHTHISICAL EYE

#### Abstract Title

LIP MUCOUS GRAFT IN IRRITATIVE PHTHISICAL EYE

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#### Abstract Type

Case Report

#### Introduction

Phthisis bulbi is an end-stage eye disease characterized by size-reduction and anatomical deformities of the eyeball. Phthisis bulbi is treated with an ocular/ scleral shell prosthesis for cosmetic purposes. However, in irritative phthisis bulbi, because the cornea is still sensitive, corneal discomfort often leads to prosthesis-usage failure. Permanent closure of the cornea is required for the eye to tolerate prosthesis. One procedure that can be performed is closing the cornea with oral mucosal graft (either cheek or lip mucous).

#### Case Illustration

Patient with left phthisical eye, who had positive corneal sensibility test, underwent permanent corneal closure with oral mucosal graft. The procedure was performed under general anesthesia. Oral mucosal graft was taken from lower lip mucous (avoiding lip-frenulum) according to the measurement of the cornea size. After doing superficial keratectomy and bulbar-conjunctival peritomy, mucous graft was sutured to the episclera using vicryl 8.0. The post-operative follow up was good and the prosthesis was well-attached. Patient achieved good ocular comfort and acceptable cosmetic appearance.

#### Discussion

Evisceration or enucleation was not chosen because over time the eye socket will become atrophy. This loss of volume leads to eyelids weakness, as the Result, the prosthesis become unsuitable. Applying prosthesis after corneal closure with graft provides better ocular-motility and cosmetic Results than evisceration or enucleation. Phthisis bulbi patient with graft has good prognosis because intra-orbital volume can be maintained.

#### Conclusion

Lip mucosal grafts was the preferred approach to permanently close a sensitive cornea before prosthesis application, because the orbital volume can be maintained.

#### Keyword

phthisis; graft; mucosa

#### Category

Free Paper Presentation

#### Latest Update

August 12, 2020

#### Status

Submitted

## Epos-ROO-08

### OCULAR SURFACE SQUAMOUS NEOPLASIA IN OCULOCUTANEOUS ALBINISM PATIENT

#### Abstract Title

OCULAR SURFACE SQUAMOUS NEOPLASIA IN OCULOCUTANEOUS ALBINISM PATIENT

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#### Abstract Type

Case Report

#### Introduction

Ocular Surface Squamous Neoplasia (OSSN) is the most common non pigmentary neoplasm in conjunctiva. Previously cited risk factors include advanced age, light skin pigmentation, ultraviolet light B exposure, tobacco smoke, and pigmentary disorder.

#### Case Illustration

A 60 year old male presented with a pink nodular mass in limbal area in temporal conjunctiva with corkscrew vascular pattern and feeder vessels. This patient has albinism, esotropia, nystagmus, and foveal hypoplasia. We performed an excisional biopsy with 5-fluorouracil and cyclocryotherapy with no touch technique. Histopatology Result showed Squamous Cell Carcinoma Keratinizing Not Other Specified (NOS).

#### Discussion

Albinism can be found throughout a different region in Indonesia such as in South Sumatera and based on phenotype analysis can be categorized as OCA2 or OCA4. In Oculocutaneous albinism (OCA), lack of pigments make individuals with albinism very sensitive to light. This condition may lead to possible increase in the risk of OSSN. In OSSN, excisional biopsy with No touch Technique could reduce the probability of recurrence.

#### Conclusion

Pigmentary disorder is a known risk factor for OSSN. This condition may lead to an increase of light sensitivity. The best approach for management of OSSN is excisional biopsy with No touch Technique combined with topical chemotherapy and cryotherapy.

#### Keyword

OSSN, OCA, pigmentary disorder

#### Category

E-Poster

#### Latest Update

August 13, 2020

#### Status

Approved As E-Poster

## Epos-ROO-09

### WIDE EXCISION MASS AND FULL THICKNESS SKIN GRAFT IN BASOSQUAMOUS CELL CARCINOMA: A CASE REPORT

#### Abstract Title

WIDE EXCISION MASS AND FULL THICKNESS SKIN GRAFT IN BASOSQUAMOUS CELL CARCINOMA: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Basosquamous cell carcinoma is a rare type of skin tumor that showed characteristic histological findings of both Basal cell carcinoma and Squamous cell carcinoma. Etiology of Basosquamous cell carcinoma is multifactorial, but ultraviolet radiation, aging, and tobacco exposure play key roles in the onset of Basosquamous cell carcinoma. Management of

**Basosquamous cell carcinoma is excision of mass. Radiotherapy or chemotherapy depends on margin Status and lymphovascular involvement.**

#### Case Illustration

A-42-year old male presented with chief complaint gradually enlarge mass on his left eye since 10 years ago. Ophthalmology examination showed mass on his left superior palpebra with size 4.5cm x 4.6cm, with irregular surface, colored black reddish, and easily bleed. Patient underwent wide excision mass, full thickness skin graft, biopsy on his left superior palpebra and has done routine follow up along 1 month after surgery. Biopsy examination revealed Basosquamous Cell Carcinoma and skin graft on his left superior palpebra was healed.

#### Discussion

Basosquamous cell carcinoma is a variant of Basal cell carcinoma. The transitional zone on histopathology showed transformation of Basal cell carcinoma into Squamous cell carcinoma. Full excision with tumor free margins is essential. Local radiotherapy needed depends on tumor stage and radiography evaluation should be considered to investigate the metastases.

#### Conclusion

Wide excision mass is main management for treating Basosquamous cell carcinoma. Reconstruction of structure that involve with the mass is necessary to achieve good anatomical and cosmetic Result.

#### Keyword

Basosquamous Cell Carcinoma, Skin Graft, Skin Tumor

#### Category

E-Poster

#### Latest Update

August 13, 2020

#### Status

Approved As E-Poster

## Epos-ROO-10

### MANAGEMENT AND FOLLOW UP OF SUPRACLAVICULAR FULL THICKNESS SKIN GRAFTS FOR CICATRICAL ECTROPION CAUSED BY BURN INJURY : A CASE REPORT

#### Abstract Title

MANAGEMENT AND FOLLOW UP OF SUPRACLAVICULAR FULL THICKNESS SKIN GRAFTS FOR CICATRICAL ECTROPION CAUSED BY BURN INJURY : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Eyelid reconstruction followed by facial burns represents a surgical challenge. Surgical management consists in correcting the lid defect often associated with a skin graft and lid tightening.

#### Case Illustration

a 18-years-old man was referred because suffered cicatricial ectropion on superior-inferior eyelid of right eye after got burn injury 4 months before come to our outclinic, with cicatricial tissue on 50% on right face after facial burns. Ocular examination revealed a visual acuity 20/20 on both eyes, lagophthalmos but a good Bell's phenomenon, and diffused ectropion on the eyelid of right eye. Reconstruction was made a release contracture tissue, lid tightening and full thickness skin grafts from donor site which recommended from supraclavicular 60 x 30 mm for superior eyelid and 50 x 40 mm for inferior eyelid, place the graft and fix it with a bolster and Frozt suture. We follow up the patient, 1 day, 1 week, and 6 months post operation.

#### Discussion

Major issues when addressing cicatricial ectropion followed by severe burns are : right donor site selection, slightly oversized graft allowed for some contraction and full eyelid closure. For further plan is consultation to plastic surgery to manage other cicatricial tissue of part of body.

#### Conclusion

Reconstruction for diffused ectropion by using full thickness skin graft and lid tightening are better option for correction of cicatricial ectropion which caused by burn injury.

#### Keyword

Cicatricial Ectropion, Full thickness skin grafts, eyelid reconstruction

#### Category

E-Poster

#### Latest Update

August 14, 2020

#### Status

Submitted

## Epos-ROO-11

### RECURRENT CILIARY BODY MELANOMA AFTER INADEQUATE SYSTEMIC ADJUVANT CHEMOTHERAPY

#### Abstract Title

RECURRENT CILIARY BODY MELANOMA AFTER INADEQUATE SYSTEMIC ADJUVANT CHEMOTHERAPY

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Andi Pratiwi (Department of Ophthalmology, Faculty of Medicine, Hasanuddin University)

#### Abstract Type

Case Report

#### Introduction

Ciliary body melanoma is diagnosed rarely because of its location and unclear associated symptoms. The existence of orbital recurrent depends on several factors including the width of the intraocular tumor, the diameter, the tumor location and degree of intraocular tumor necrosis.

#### Case Illustration

A sixty-year-old man presented with black mass at the perilimbal area of the left eye since 2 years prior with a decrease in visual acuity. History of incisional biopsy at the same site 1 year before, with pathology presented Malignant Melanoma. The patient rejected enucleation but then completed chemotherapy for 8 months with dacarbazine 1300mg. after consulted to haemato-oncologist. Recurrent hyperpigmented mass with 8 x 9 x 5 mm in sized, appeared at limbus area 4 months later, and followed by enucleation 1 month in advanced. Gross macroscopic section displayed the mass arose from the ciliary body area, filling in the anterior part of the left eye. Microscopic Result was consistent for malignant melanoma. Metastatic workup remain normal, without any lymph node enlargement.

#### Discussion

The efficacy of systemic chemotherapy alone in intraocular melanoma was still controversy. Dacarbazine is ineffective as a single therapy and reduce the metastasis. Patients with large tumors had more than double the risk of recurrence of patients with smaller tumors. Enucleation still the best therapy for large tumor.

#### Conclusion

Single adjuvant chemotherapy in ciliary body melanoma may be considered inadequate in large size ciliary body melanoma.

#### Keyword

Ciliary body Melanoma, uveal melanoma, Pathology Anatomy

#### Category

E-Poster

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## Epos-ROO-12

### MODIFIED ONE STAGE SURGERY FOR BLEPHAROPHIMOSIS SYNDROME : A CASE REPORT

#### Abstract Title

MODIFIED ONE STAGE SURGERY FOR BLEPHAROPHIMOSIS SYNDROME : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Blepharophimosis-ptosis-epicanthus inversus syndrome (BPES) is a rare autosomal dominant case. BPES has a great impact on a patient's visual functions and may cause poor visual development, and appearance.

#### Case Illustration

Ten years old twin sisters was diagnosed as BPES and epiblepharon. On ocular examination, the younger sister had exotropia combined with deprivation amblyopia with inner canthal distance (ICD) 42 mm, vertical interpalpebral fissure (VIPF) 4 mm, horizontal interpalpebral fissure (HIPF) 19mm, levator function (LF) 8 mm on both eyes. The older sister had HIPF 6 mm, VIPF 19 mm, and LF 2 mm in both eyes. Both of the patients underwent medial canthoplasty and maximum levator resection. After one month surgery, the younger sister had ICD 36 mm, HIPF 8 mm, and VIPF 21 mm and older sister had ICD 40 mm, HIPF 6 mm on the right eye, 8 mm on the left eye and VIPF 21 mm.

#### Discussion

BPES is a rare genetic condition by mutation in the FOXL2 gene and it is inherited in autosomal dominant pattern. The same manifestation was also found on mother and grandmother. Consensus of the most appropriate and effective surgery is still lacking. The twin sisters underwent modified one step surgery with the Result increasing of HIPF, VIPF and shortening of ICD.

#### Conclusion

The modified one stage surgical intervention using medial canthoplasty and maximum levator resection, provided an effective Results for both in function and cosmesis which decreased hospitalization time and recovery time of surgery.

#### Keyword

Blepharophimosis, One Stage Surgery, Medial Canthoplasty

#### Category

E-Poster

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### Epos-ROO-13

## Combination of Excision, Cryotherapy and Topical 5-fluorouracil (5-FU) for Ocular Surface Squamous Neoplasia of the Cornea and Conjunctiva: A Case Report

#### Abstract Title

Combination of Excision, Cryotherapy and Topical 5-fluorouracil (5-FU) for Ocular Surface Squamous Neoplasia of the Cornea and Conjunctiva: A Case Report

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#### Abstract Type

Case Report

#### Introduction

Ocular surface squamous neoplasia (OSSN) is a term that encompasses a wide spectrum of a dysplastic disease of cornea and conjunctiva, ranging from conjunctival intraepithelial neoplasia (CIN), carcinoma in situ (CIS) to invasive squamous cell carcinoma (SCC)

#### Case Illustration

In our case report, we present ocular surface squamous neoplasia of the conjunctiva and cornea in a 78-year old man. Our diagnostic included : slit lamp and fundus examination. The patient underwent surgical excisional biopsy of the lesion and intraoperative cryotherapy of the cut conjunctival edges and sclera-conjunctiva base region. And we applied topical chemotherapy intraoperative with 5-fluorouracil (5-FU) application for 1 minute. The patient has been follow up for 1 month with no recurrence of the disease.

#### Discussion

Ocular surface squamous neoplasia (OSSN) is a very rare tumor which occurs in sun damaged ocular surface, usually at the limbus in elderly men. The most common method of treatment for conjunctival neoplasm has been wide excision with cryotherapy to the surgical margins and primary or adjuvant chemotherapy. Topical chemotherapy as a nonsurgical method for treating the entire conjunctival surface, with minimal side effects and possibility of treating the therapy cycles depending on clinical response. Topical 5-fluorouracil has been used as common topical chemotherapeutic treatment option postoperative to reduce recurrence.

#### Conclusion

OSSN is a surgical challenge requiring a specialized "no-touch" (NT) technique. In our case, the combination of surgical excision with intraoperative cryotherapy and topical chemotherapy with 5-fluorouracil (5-FU) application, proved to be a good choice for eradication of OSSN with accurate further monitoring of the patient.

#### Keyword

ocular surface squamous neoplasia, cryotherapy, 5-fluorouracil (5-FU), excision

#### Category

E-Poster

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### Epos-ROO-14

## Delayed management of Intraocular Foreign Body (IOFB) leading to endophthalmitis, how to avoid evisceration?: A case report

#### Abstract Title

Delayed management of Intraocular Foreign Body (IOFB) leading to endophthalmitis, how to avoid evisceration?: A case report

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#### Abstract Type

Case Report

#### Introduction

The incidence of retained Intraocular Foreign Body (IOFB) occurs in 18% to 41% among ocular trauma cases, lead to various range of ocular pathologies. Endophthalmitis is one of the complications that Result in irreversible vision loss. Appropriate management and early diagnosis often lead to better anatomical outcomes and visual prognosis in most cases. This case report focused on clinical diagnostic findings, management, and outcomes of the patients with posterior segment IOFB.

#### Case Illustration

Two male patients, aged 23 and 57 years old, referred to our hospital with a history of endophthalmitis due to penetrating metal injury on the globe. They complained loss of vision, redness, and pain after four days treated in district hospital. Both patients reported a markedly decreased visual acuity. Limbal and scleral injury accompanied by corneal melting were found in slit examination. The Head CT Scan showed corpus alienum with metal density in intraocular. IOFBs extraction were failed that lead to an evisceration for both patients

#### Discussion

Delayed treatment of IOFB in penetrating injury may lead to endophthalmitis. In Ocular Trauma Score, endophthalmitis has been included as an indicator for poor visual prognosis. Plain head x-ray with limbal ring and Head CT Scan are suggested as diagnostic tools. More aggressive initial treatment such as intracameral and intravitreal injection are known to prevent worsening.

#### Conclusion

Accurate ophthalmology examination is needed to establish the diagnosis of IOFB. Early management of IOFB should be done immediately before referring to tertiary hospital. Thus, good prognosis could be achieved.

#### Keyword

endophthalmitis, IOFB, evisceration, CT Scan

#### Category

E-Poster

#### Latest Update

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## Epos-ROO-15

### Orbital Pseudotumor : Diagnostic and Rapid Management in a Suburban Area

#### Abstract Title

Orbital Pseudotumor : Diagnostic and Rapid Management in a Suburban Area

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#### Abstract Type

Case Report

#### Introduction

Idiopathic Orbital Inflammatory Syndrome is also known as orbital pseudotumor (OP). It is a benign, idiopathic, non infectious and non neoplastic clinical syndrome with an inflammatory mass within the orbit without specific causes.

#### Case Illustration

A 47 years old woman came with left eye (LE) protrusion, blurred vision, retrobulbar pain, and severe headache at regular intervals. Physical examination of the LE showed a decreased in visual acuity, protrusion, chemosis conjunctiva, increased in IOP, total ophthalmoplegia, ipsilateral afferent pupillary defect and optic disc edema. Plain and contrast CT-Scan was showed a hypertrophy of ocular muscles with soft tissue swelling. Patient then diagnosed with idiopathic orbital inflammation and immediately had a high dose steroid for 5 days with observation in the glucose level for toxicity. Afterwards, she was given an oral corticosteroid and tapered off for the next few weeks. A gradual improvement in protrusion, motility and visual acuity were shown after one month follow up.

#### Discussion

OP is a benign disease with unknown etiology, that affects unilaterally with a typical symptoms of orbital ache, proptosis, eyelid swelling, limited motility, chemosis and visual loss. The gold standard of OP is biopsy is especially for patients with recurrent condition. in the present case, the symptoms are typical, although due to limited facility only CT Scan was performed. Patients also had a high dose corticosteroid, which is still the main treatment for OP and showed an improvement.

#### Conclusion

In a suburban area, a correct diagnostic tools and rapid management are still gave an improvement to patients condition.

#### Keyword

Idiopathic Orbital Inflammatory Syndrome, protusion, steroid therapy

#### Category

E-Poster

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## Epos-ROO-16

### BILATERAL RETINAL ASTROCYTIC HAMARTOMAS IN TUBEROUS SCLEROSIS : A CASE REPORT

#### Abstract Title

BILATERAL RETINAL ASTROCYTIC HAMARTOMAS IN TUBEROUS SCLEROSIS : A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Retinal astrocytic hamartoma (RAH) is the most frequent and characteristic ocular manifestation of Tuberous sclerosis (TS).

#### Case Illustration

A 11-year-old child patient in ophthalmology examination obtained visual acuity of 6/6 and no anterior segment abnormality in both eyes. Translucent round lesions, smooth surface, firm margin, 1 disc diameter at 5 and 7 o'clock and no elevation were showed in posterior segment examination of the right eye. Pale round lesions with elevation in peripapillary 3 diameter disc with indefinite margin was seen in left eye. Hyperreflective intraretina lesions, normal RPE structure and no retinal traction were appeared in Optical coherence tomography (OCT). Whereas in the left eye, hyperreflective lesion was obtained intraretinal and posterior shadowing in the peripapillary. There were normal macula in both eyes. Multiple localized skin nodules with firm border in face were found in this child. He also had multiple hypopigmented macules over the arms, limbs and trunks along with a Shagreen patch over posterior trunk. Calcification in bilateral periventricles revealed on head CT scan.

#### Discussion

RAH is benign retinal tumor found near the optic disc and involve the retina constitute major ophthalmic manifestation of TS. Bilateral hamartomas were appeared in this child that occur in 30% of patients. Noncalcified lesions (flat, smooth and transparent) are the most common type of hamartoma and vary in size. RAH generally remain stable over years and rarely affect vision.

#### Conclusion

Bilateral retinal astrocytic hamartoma is a rare case and routine ophthalmic examination is important in patient of TS to prevent from being overlooked.

#### Keyword

tuberous sclerosis, bilateral retinal astrocytic hamartoma

#### Category

E-Poster

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## Epos-ROO-17

### Surgical Correction of Epiblepharon Patient Using Modified Hotz Procedure

#### Abstract Title

Surgical Correction of Epiblepharon Patient Using Modified Hotz Procedure

#### First Author

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Hendriati

#### Co Author

#### Abstract Type

Case Report

#### Introduction

Epiblepharon is a congenital lid anomaly in which the lower eyelid pretarsal muscle and skin overriding above lower eyelid margin, formed a horizontal fold of tissue, causing cilia to assumed a vertical position. The pathogenesis of epiblepharon was the deficiency of attachment of eyelid retractor fibers to skin which allows skin and muscle to rolled upward. An extra tented-up fold of skin pushed up the cilia, Resulting in irritation and corneal erosion.

#### Case Illustration

13 years old female patient came to M.Djamil hospital (October 8, 2019) with chief complaint discomfort of both eyes since 5 years ago. History of intermitten red eyes, itching, glare, tearing, often rubbing the eyes, since the age 4 years old. Visual acuity ODS 20/25 cc C-0.50 (1800) became 20/20. Horizontal skin fold on the inferior palpebra (+), trichiasis (+), corneal eyelash touch (+) during downgaze, and normal eyelid margin ODS.

#### Discussion

Surgical correction using modified Hotz procedure for lower eyelid was performed with skin incision line 1-2 mm below the lash line, minimal amount of redundant skin and orbicularis oculi muscle excision, cilia are rotated anteriorly by suturing skin tissue of upper skin muscle flap onto tarsal plate with 6-0 absorbable suture. After surgical correction, redundant skin of inferior palpebra and corneal eyelash touch were disappeared. There were no lid retraction, wound dehiscence, or ectropion.

#### Conclusion

Surgical correction was needed for the cases in which there was a significant corneal injury from the lashes. Early surgery and visual rehabilitation were important for epiblepharon patients to prevent astigmatism and amblyopia.

#### Keyword

Epiblepharon, horizontal skin fold, trichiasis, corneal injury, astigmatism

#### Category

E-Poster

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## Epos-ROO-18

### AN AGGRESSIVE CASE OF SINONASAL SQUAMOUS CELL CARCINOMA EXPANSION TO THE ORBITAL AND THE CRANIAL: A CASE REPORT

#### Abstract Title

AN AGGRESSIVE CASE OF SINONASAL SQUAMOUS CELL CARCINOMA EXPANSION TO THE ORBITAL AND THE CRANIAL: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Squamous cell carcinoma (SCC) is an epithelial malignancy involving many anatomical sites, and is the most common site of cancer spreading.

#### Case Illustration

A 49-year-old man with history of nasal tumor was admitted with protrusion of left eye due to orbital medial tumor mass following an 8-month history of bulging and pain. The patient had undergone removal surgery, chemotherapy and radiotherapy two years ago. His visual acuity was >2/60 on the right eye and no light perception on the left eye. A medial orbital mass was found on the left eye pressing the eyeball to the lateral side. A mass expansion was found on the sinus and inferior orbital. MRI and histopathological examination were performed to determine the assessment of protrusion of left eye due to Orbital Medial Tumor Mass due to Non-keratinizing SCC Sinonasal. The left eye exenteration and tumor mass removal was conducted and continued with chemotherapy procedure. The patient's condition after 1.5 months of review was reported: his left eye was swollen and bleeding. A solid, hump-like, hyperpigmented, actively bleeding, and pain mass sized 10cmx8cm was found. After 2 months of review, the mass was solid, necrotic tissue and maggots were found.

#### Discussion

This case demonstrates that even aggressive and repetitive surgical may not be adequate in preventing worse outcome. Additional studies are needed to improve our understanding of the similarities and differences among various SCCs, toward improvements in diagnosis, prognosis and therapy.

#### Conclusion

Squamous cell carcinoma demonstrates a wide range of epithelial tumors that vary in their anatomic sites.

#### Keyword

Squamous cell carcinoma, Non-keratinizing, Orbital Tumor

#### Category

E-Poster

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## Epos-ROO-19

### Imaging Features in Determining Rare Case of Intraocular Medulloepithelioma in Children: A Case Report and Review of The Literature

#### Abstract Title

Imaging Features in Determining Rare Case of Intraocular Medulloepithelioma in Children: A Case Report and Review of The Literature

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#### Abstract Type

Case Report

#### Introduction

Intraocular Medulloepithelioma is a rare congenital tumor of non-pigmented ciliary epithelium which often misdiagnosed with retinoblastoma. Limited research available leads to less information of the disease. Imaging may provide diagnostic value and information regarding to the disease, such as Computed Tomography, Magnetic Resonance Imaging, and Ultrasonography.

#### Case Illustration

A 3-year-old girl came with white reflex on left eye since one a half years ago. History of recurrent eye redness and poor vision for last five months. CT scan showed hyperdense mass in the anterior half of the globe. Ultrasonography showed hyperechoic lesion occupying the posterior segment of the globe with irregular internal reflectivity and multiple hypoechoic areas (multicystic) with no calcium deposits. Based from examination, patient diagnosed with retinoblastoma and intraocular medulloepithelioma as differential diagnose. Enucleation and biopsy were performed. Histopathologically found ciliary process surrounded by ribbon, cords, and small sheets of blue tumor cells and occasional Flexner-Wintersteiner rosettes which is specific for intraocular medulloepithelioma.

#### Discussion

Imaging features in intraocular tumor provide determine any mass, spreading, or complications. CT and MRI help to determine extraocular tumor extension in malignant variety. CT allows better visualization of calcifications than MRI, but it demonstrates the complication such as retinal detachment or hemorrhages. CT shows heterogenous tumor with solid and cystic elements, noncalcified, and intense enhancement of the solid component. Ultrasound shows highly echogenic mass from the ciliary body and describe intratumoral vascularity.

#### Conclusion

Definitive diagnosis of intraocular medulloepithelioma is made using histopathological examination. Ophthalmology imaging can lead to the diagnosis and offer valuable information regarding the disease.

#### Keyword

Ocular imaging, medulloepithelioma, intraocular mass, children.

#### Category

E-Poster

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## Epos-ROO-20

### LOWER EYELID RECONSTRUCTION AFTER CARCINOMA EXCISION AND OUTCOMES

#### Abstract Title

LOWER EYELID RECONSTRUCTION AFTER CARCINOMA EXCISION AND OUTCOMES

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#### Abstract Type

Case Report

#### Introduction

Eyelid reconstruction after excision of carcinoma can be challenging due to dynamic movement and anatomy of eyelid. Flap and graft are choices of techniques to fill and repair wide eyelid defects.

#### Case Illustration

Case 1: Woman, 92 yo, with Squamous Cell Carcinoma OD, defect 25x15 mm full thickness, upper and lower eyelid involvement with lost of margin and lateral canthal. Reconstruction with transpositional flap and oral mucosa graft. Good aesthetic and minimal lagophthalmos were seen at follow up. Case 2: Woman, 80 yo, with Basal Cell Carcinoma OS, defect at medial canthal 12x7 mm and 30x10 mm with margin involvement at lower eyelid. Rotational flap and tarsoconjunctival graft was done. Lagophthalmus was minimal after 2 weeks. Case 3: Woman, 65 yo, with Basal cell carcinoma OD, 25 x10 mm, muscle depth, torsional flap was done. Good wound healing and no lagophthlmo at follow up.

#### Discussion

Large lower eyelid defects typically able to be closed with utilizing skin flaps and graft to substantiate the posterior lamella. In case 1 and 2 we need graft for posterior lamellae reconstruction. In case 3, we just needed rotational flap. All this patient with good aesthetic and functional outcomes.

#### Conclusion

Combination of skin flap (transposition and rotational flap) and graft (oral mucosa and tarsoconjunctival), and only rotational flap are can achieve favorable functional and aesthetic outcomes in wide excision of carcinoma

#### Keyword

Transposition flap, Rotational flap, oral mucosal graft, tarsoconjunctival graft.

#### Category

E-Poster

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## Epos-ROO-21

### LATERAL TARSALE STRIP WITH FASCIA LATA SUSPENSION FOR THE TREATMENT OF INVOLUTIONAL ECTROPION: A CASE REPORT

#### Abstract Title

LATERAL TARSALE STRIP WITH FASCIA LATA SUSPENSION FOR THE TREATMENT OF INVOLUTIONAL ECTROPION: A CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Involutional ectropion is caused by the imbalance of the lower lid protractors and retractors due to ischemic and atrophy in elderly. The use of lateral tarsal strip alone can achieve symptomatic relief, but in the case accompanied by prominent laxity, a combination of surgical procedures is necessary to achieved adequate correction. Lateral tarsal strip combined with fascia lata suspension is one of the choices.

#### Case Illustration

69-year-old patient was diagnosed with involutional ectropion on the right eye. Patient had horizontal lid laxity with prominently negative in snap back test and over 6 mm in distraction test. There was scleral show sign with normal TBUT. The MRD 2 distance was 10 mm with no eversion at lacrimal punctum. Ectropion was repair with lateral tarsal strip combined with fascia lata suspension. One week after surgery, the MRD 2 distance improved to 6 mm with no apparent scleral show.

#### Discussion

The seat of fascia lata was made on the anterior lamellar of the lower lid. Fascia lata was taken from the right thigh and inserted on the seat in front of the tarsus. Fascia lata then fixated in the medial and lateral canthal tendon to the periosteum. Combine procedure with fascia lata suspension can significantly improve the laxity and distance between the lower lid edge and inferior limbus.

#### Conclusion

The lower eyelid suspension technique with fascia lata combined in tarsal strip procedure is an effective and alternative method of treatment involutional ectropion.

#### Keyword

Involutional ectropion, lateral tarsal strip, fascia Lata suspension

#### Category

E-Poster

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## Epos-ROO-22

### Orbital Metastasis as Initial Clinical Appearance of Thyroid Carcinoma: A Case Series

#### Abstract Title

Orbital Metastasis as Initial Clinical Appearance of Thyroid Carcinoma: A Case Series

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#### Abstract Type

Case Report

#### Introduction

Metastases to the orbit from all types of cancer are infrequent and often unexpected. Even with modern radiological techniques, orbital metastasis remains a diagnostic challenge. We present three cases of orbital metastases that developed as the initial manifestation of thyroid carcinoma.

#### Case Illustration

All patients were female aged 28-65 years old. They initially came with complaints of orbital mass. Patient 1 and 3 had prolonged history of thyroid disease. On physical examinations a lump was found on the neck, although Patient 2 did not previously realize its existence. The patients underwent contrast enhanced computed tomography (CT) scan and open biopsy of the tumor revealed that it was a metastasis from thyroid carcinoma. Total thyroidectomy was then performed on all three patients with Results showing papillary thyroid carcinoma (PTC). All patients were also treated by ablation therapy using radioactive iodine (RAI).

#### Discussion

If present, orbital metastasis commonly occurs as the earlier manifestation of thyroid carcinoma. Unilateral proptosis and diplopia are the primary symptoms of thyroid carcinoma with orbital metastasis. At present, guidelines on the treatment of thyroid carcinoma with orbital metastasis has not yet been established, apart from surgical removal of the primary tumor followed by RAI ablation. Older age and metastatic disease contribute to poor prognosis.

#### Conclusion

Although uncommon, thyroid carcinoma must be considered as a potential primary tumor in patients with orbital mass. As such, ophthalmologists must also be aware of the importance of physical examination as there may be findings which are very helpful in determining the origin of the metastasis.

#### Keyword

Orbital metastasis; Orbital tumor; Thyroid carcinoma

#### Category

E-Poster

#### Latest Update

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## Epos-ROO-24

### ILIAC BONE GRAFT FOR BLOWOUT FRACTURE MANAGEMENT

#### **Abstract Title**

ILIAC BONE GRAFT FOR BLOWOUT FRACTURE MANAGEMENT

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#### **Abstract Type**

Case Report

#### **Introduction**

Blowout fracture is a traumatic deformity of the orbital wall, Resulting from orbital blunt trauma of an object larger than the orbital aperture. Blowout fracture repair is indicated when enophthalmos is troublesome to the patient, or when diplopia interferes patient's activities. This study is to report blowout fracture management using iliac bone graft.

#### **Case Illustration**

A 35 years old man complains pain on his left eye when moving his eye and diplopia in upgaze since 4 months after fell down from stairs. Eye position is orthophoria, visual acuity 6/6 on both eye, anterior and posterior segments are normal, restricted movement to superior on left eye, Hertel exophthalmometry examination on right eye 15mm and left eye 7mm (base 90). The patient was diagnosed with left eye enophthalmos, suspect inferior rectus muscle and adnexal entrapment and neglected blow out fracture.

#### **Discussion**

Surgical management is done 4 months after the trauma to release and pullback inferior rectus muscle and adnexal, and cover the defect using iliac bone graft join operation with Plastic, Reconstructive and Aesthetic Surgery Department. Post operation we found Hertel Exophthalmometry examination right eye 15mm and left eye 10mm (base 90), diplopia and restriction movement to superior and superolateral are still but improved

#### **Conclusion**

Iliac bone graft can be used as an alternative in orbital floor reconstruction, since it easy to harvest, low risk to rejected or extruded and can be used in large defect. Optimal outcome of blowout fracture repair can be achieved if the surgical management is done before two weeks after the

#### **Keyword**

Blowout fracture, Iliac bone graft, Surgery

#### **Category**

E-Poster

#### **Latest Update**

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#### **Status**

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## Epos-ROO-25

### CONJUNCTIVAL MALIGNANT MELANOMA : A CASE REPORT

#### **Abstract Title**

CONJUNCTIVAL MALIGNANT MELANOMA : A CASE REPORT

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#### **Abstract Type**

Case Report

#### **Introduction**

Conjunctival Malignant Melanoma is a pigmented lesion of the ocular surface. It arises from melanocytes located among the basal cells of the conjunctival epithelium. It is an uncommon tumor that comprises about 2% of all eye tumors and a potentially devastating tumor that may invade the local tissues of the eye, spread systemically through lymphatic drainage and hematogenous spread, and recur in spite of treatment.

#### **Case Illustration**

A 39 Years old female came to Dr. M. Djamil hospital (July 9, 2020) with chief complain a mass on the ocular surface that grew bigger since 6 months ago. The mass began with size as beads since birth, but grew rapidly since 6 months ago. Visual acuity of both eyes were 20/20. Pathological finding on bulbar conjunctiva of left eye was hyperpigmentation mass on temporal part of bulbar conjunctiva, well defined, rough surface, involving temporal cornea 3 mm from limbus, measured 10x7x3 mm. There were no enlargement of lymph nodes on preauricular or submandibular.

#### **Discussion**

The patient underwent surgical wide excision of the mass under local anesthesia. The excision was firstly done in corneal component and then conjunctival component was excised maximum until achieving free tumor margin. Histopathology of the tumor was Malignant Melanoma. The patient had completed 4 weeks follow up. There were no evidence of tumor's recurrence.

#### **Conclusion**

Conjunctival Malignant Melanoma is a rare but potentially deadly ocular malignancy. The management for the malignant melanoma is wide local excision. Surgical management must be followed by monitoring the possibility of the recurrence and metastases

#### **Keyword**

Conjunctival Malignant Melanoma, bulbar conjunctiva, surgical wide excision

#### **Category**

E-Poster

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## Epos-ROO-27

### CHALLENGES IN THE MANAGEMENT OF SEVERE EYELID TRAUMA : HOW TO DEAL WITH IT?

#### Abstract Title

CHALLENGES IN THE MANAGEMENT OF SEVERE EYELID TRAUMA : HOW TO DEAL WITH IT?

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#### Abstract Type

Case Report

#### Introduction

Preservation of vision, preventing of ocular complications and restoring the damaged structures are the goals on managing periorbital trauma. An injury to the eyelid may range from mild to serious. On account of complex eyelid anatomy, profound knowledge of anatomy and plastic reconstructive principles are required.

#### Case Illustration

We report a challenging case of severe eyelid trauma in a 23-year-old male due to traffic accident. He fell down from his motorcycle, and the right side of his face was dragged across the asphalt. On admission, he was in pain but fully conscious. Visual acuity in the right eye was 1/60, ocular motility was limited, the superior eyelid was severely injured, and there was abrasion involved the central part of the cornea.

#### Discussion

We ordered orbital CT-scan which showed unremarkable findings. Emergent reconstructive surgery then was performed under general anesthesia. During the surgery, we carefully identified the eyelid structures to ensure correct tissue position and proper suture placement. Meticulous suturing was done to relocate the avulsed structures to their respective positions. Despite disorganization of the eyelid, the reconstruction was successful. The patient recovered well after the surgery. On subsequent visits, there was a mild ptosis but the wound healed well with proper eyelid alignment, no ocular motility limitation and the right eye vision was improved.

#### Conclusion

The primary reconstruction of severe eyelid trauma is a real challenge, but with thoughtful understanding of the eyelid anatomy and reconstructive principles, the successful reconstruction can be achieved, for both functional and aesthetic outcome.

#### Keyword

Severe eyelid trauma, eyelid anatomy, reconstructive surgery.

#### Category

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## Epos-ROO-29

### SURGICAL CORRECTION OF MICROPHthalmIA WITH VOLUME FILLING USING LABIAL MUCOSAL GRAFT, CANTHOPLASTY AND FORNIXPLASTY : CASE REPORT

#### Abstract Title

SURGICAL CORRECTION OF MICROPHthalmIA WITH VOLUME FILLING USING LABIAL MUCOSAL GRAFT, CANTHOPLASTY AND FORNIXPLASTY : CASE REPORT

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#### Abstract Type

Case Report

#### Introduction

Congenital microphthalmia is a rare case in malformation of the development of the eyeball structure, which can cause deficiency of orbitofacial growth and impaired visual ability. The management principle of microphthalmia is to balance the expansion of the palpebral fissures, the fornix's depth and conjunctival sac, and the addition of orbital volume according to orbital growth.

#### Case Illustration

A 19 years old female patients came to RSUP Dr. M. Djamil Padang hospital with chief complaint left eye ball has smaller size since childhood. The patient wants to use the ocular prosthesis on the left eye. The left eye cannot see since birth. History of trauma (-). Previous eye surgery (-). Vertical palpebral fissure OD: 9 mm, OS: 4 mm; horizontal palpebral fissure OD : 30 mm, OS: 25 mm. Left eye was micro cornea with diameter 7 mm. The inferior fornix is slightly shallow. Sulcus is slightly deep

#### Discussion

Surgical correction with volume filling using labial mucosal graft, canthoplasty and fornixplasty was done under general anesthesia. The procedure was started with lateral fornixplasty, followed by cantholysis of lateral canthal. The labial mucosal graft that had been identified before was then sutured into bulbar conjunctiva with vicryl 6.0 interrupted. The conformer was then placed followed by suturing the canthoplasty, fornixplasty and tarsorrhaphy

#### Conclusion

The management principle of microphthalmia is to balance the expansion of the palpebral fissures with canthoplasty, fornix's depth and conjunctival sac with fornixplasty and the addition of orbital volume using labial mucosal graft.

#### Keyword

Microphthalmia, Labial Mucosal Graft, Volume filling

#### Category

E-Poster

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## Epos-ROO-30

### Management of Infected Anophthalmic Socket: A Case Report

#### **Abstract Title**

Management of Infected Anophthalmic Socket: A Case Report

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#### **Abstract Type**

Case Report

#### **Introduction**

Anophthalmia is generally an acquired condition. The most common reason for surgical removal of the eye or its contents is blinding trauma; painful blind eyes, prevention of sympathetic ophthalmia, intraocular tumor or endophthalmitis. Discharge is a common complaint of the anophthalmic patient. Orbital pain in the anophthalmia socket can be difficult to diagnose as the etiology can range from prosthetic irritation or migration of the implant to depression.

#### **Case Illustration**

A case report a 66-year-old woman was referred with a infected of the eye socket after evisceration surgery et causa endophthalmitis, hiperemia socket, discharge and pain. The examination found the loss of suture in conjungtiva and sclera, there was involvement of infection in the sclera.

#### **Discussion**

The indication for surgery is usually clear, the choice between enucleation and evisceration is often less clear and more controversial. The socket should be evaluated for inflammation, excessive mucous, giant papillary conjunctivitis under the upper eyelid and pyogenic granulomas. Patient was taken a dermis fat graft (DFG) offers the advantages of relative availability and safe and stable orbital volume replacement following the sclera was remove

#### **Conclusion**

The anophthalmic socket has a unique set of problems and requires a different clinical and surgical approach than a socket with a globe. The management of these patients should be carried out with close communication to achieve optimal comfort for patients.

#### **Keyword**

dermis fat graft , eye socket, evisceration

#### **Category**

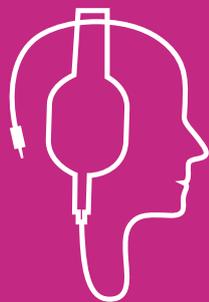
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