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**DOI :** <http://dx.doi.org/10.13005/bpj/1075>

**Abstract:**

Diosgenin and taurine are two bioactive chemicals that get high attention in recent decades because it is claimed as an antioxidant, antidiabetic, and pro fertility. The study aimed to investigate the effect of the two substances when used in combination against diabetes-related infertility in male mice. By using completely randomized design, 35 Swiss albino male mice divided into 7 groups (n=5). Group 1 treated with distilled water as normal control. Group 2 receive only alloxan as diabetic control. Group 3 only fed diosgenin 20% as diosgenin control. Group 4 treated with alloxan and diosgenin 20%. Group 5 receive alloxan and diosgenin 30%. Group 6 treated with alloxan and taurine. Group 7 treated with alloxan, diosgenin 20% and taurine. Treatments were given intraperitoneally once daily for 14 days. The parameters assessed including blood glucose levels, body and testis weight, spermatogenic cells counts, sperm counts as well as  sperm motility and viablity. The results showed  crude diosgenin extract from C.speciosus in normal mice lowers the number of spermatogonia, spermatocytes and spermatids cells in addition to decrease sperm motility. In alloxan-induced mice, diosgenin ameliorates the blood glucose levels but not effective in normalization of the testicular parameters of the animals. Taurine, on the contrary, was effective both to cope with the blood parameters and testicular disorders in alloxan-induced mice. Application of diosgenin combined with taurine in alloxan-induced mice, at the end of treatment, most effective in lowering blood glucose levels compared with other treatment but shows little contribution in normalization testicular parameters. Thus, it can be concluded that crude diosgenin extract from C.speciosus even though combined with taurine has little effect on testicular disorders in alloxan-induced diabetic mice in comparison to the application of taurine alone.

**Keywords:**

diosgenin; Costus speciosus; pacing; diabetes; taurine; alloxan