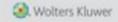


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Original Article

Predominant Determinants of Delayed Tuberculosis Sputum Conversion in Indonesia

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Abstract

Context: Sputum conversion in the first 2 months of tuberculosis (TB) treatment is closely related to successful treatment and a decrease in the likelihood of relapse. In 2015, there were 76% high TB burden countries with low rate of TB successful treatment. Alms: This study aims to evaluate the correlation between delayed sputum conversion and several determinants including social determinants, smoking, malnutrition, and type II diabetes mellitus (DM). Settings and Design: A case—control approach was used to study the potential determinants. A case sample group consisted of smear-positive TB patients with delayed sputum conversion (31 patients) at community health centers in Bandar Lampung, Indonesia. Meanwhile, a control sample group consisted of smear-positive TB patients with sputum conversion (62 patients). Subjects and Methods: Primary data consisted of social determinants and smoking, were collected through in-depth interviews. Meanwhile, secondary data consisted of malnutrition, DM, and sputum conversion were obtained from the medical record. Statistical Analysis Used: Data were analyzed using Chi-square and multivariate logistic regression. Results: Low education (odds ratio [OR]: 5.313; 95% (confidence interval [CI]: 1.711–16.503), low social class (OR: 4.993; 95% CI: 1.430–17.430), smoking (OR: 7.457; 95% CI: 1.757–31.640), and DM (OR: 7.168; 95% CI: 1.746–29.431) influenced delayed sputum conversion. Conclusions: TB control programs and follow-up treatments with low rate of TB successful treatment, should be integrate TB treatment education, smoking cessation programs and follow-up treatments for TB patients with DM to improve the probability of sputum conversion and successful treatment.

Keywords: Delayed sputum conversion, diabetes mellitus, smoking, social determinants