A survival analysis of successful and poor treatment outcome among patients with drug-resistant tuberculosis and the associated factors: A retrospective cohort study

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Deskripsi Lengkap: https://lib.ui.ac.id/detail?id=20513166&lokasi=lokal

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Abstrak

Background: Tuberculosis and its resistance are a major global health problem in the world. The increased incidence and mortality of tuberculosis in Indonesia remain a big public health issue especially in Jakarta Province. No published studies have focused on assessing the outcome treatment of tuberculosis resistance both in success and death. We aimed this study to assess the survival of cured and death outcomes as well as the determinant factors which might influence drugs resistant tuberculosis in Jakarta between 2010 and 2015. Methods: this study analyzed the national electronic tuberculosis register (e-TB Manager) of Jakarta province in 2010 to 2015. All adult patients who lived in Jakarta province and were diagnosed with multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB) were eligible for the study. Kaplan Meier survival curve was used, together with log-rank test and Chi-Square (X2) test for descriptive analysis. Cox regression analysis helped determine the potential risk factors. Several risk factors were analyzed in this study, including age, gender, residency, HIV status, resistance status, and history of previous treatment. Results: we analyzed 553 samples in this study. The drug-resistant tuberculosis cases increased gradually from 2010 to 2015. Of all cases, 248 and 67 patients were cured and death, respectively. There was a difference in survival rate between patients diagnosed with MDR-TB and XDR-TB with successful treatment. Poor treatment outcome (death) among patients was predicted by age greater than 60 years old (HR 3.48; 95% CI 1.48 - 8.38, p-value = 0.004). Conclusion: there was a difference survival rates between success treatment (cured) and poor treatment outcome (death) during six years of observation. Age of patients is a single-predictor in survival of death. While, HIV status and resistance status were predictors in survival of cured.