

ABSTRACT

Background. Multi-Drug Resistance Tuberculosis (MDR-TB) is a global health threat as it can increase TB morbidity and mortality worldwide. The percentage of death in MDR-TB patients during the treatment process is also high and several countries find different predictors of death. This will affect the survival status of MDR-TB patients. **Objective.** To analyze the survival status and clinical severity predictors in MDR-TB patients at the Persahabatan Central General Hospital, Jakarta. **Methods.** This study used retrospective cohort study design of patients who started MDR-TB treatment during 2019-2021 and conducted data between December 2023 and March 2024. Observation period started from the time MDR-TB diagnosis was established and treatment was initiated until the final event occurred (clinical severity/mortality) or for 24 months of observation. The data was taken from 14 variables and obtained from medical records in the hospital. The data were then analyzed using statistical software SPSS (Statistical Product and Service Solutions) version 26. Data analysis was performed using the log-rank test and significant when the p-value is <0.05 . Every variable was tested for cox proportional hazard assumption by analyzing log minus log survival plot. The multivariat analysis would be continued when the variable had a p-value <0.25 and significant if the p-values are <0.05 . **Result.** This study observed 244 patients who diagnosed with MDR-TB from 2019-2021 and followed for 2 years with a total person-days of follow-up of 113,281 days. Median survival time-to-death (IQR) in deceased patients was 89 days (32-577 days). Significant predictors of clinical severity were anemia status (aHR 9.89; 95% CI: 2.3-42.6), HIV reactive status (AHR 5.27; 95%CI: 1.17-23.72) and Severe Adverse Drug Reaction/ADR (aHR 9.16; 95 %CI: 4.19-20.0). **Conclusion.** Controlling predictors such as HIV screening activities, anemia status in TB patients, active therapeutic drug monitoring of MDR-TB regimen and early treatment have played a major role in reducing the mortality rate of TB patients.

Keywords: Multi-Drug Resistance Tuberculosis, survival status, clinical severity predictors, log-rank test, multivariat analysis

INTISARI

Latar Belakang. *Multi-Drug Resistance Tuberculosis* (MDR-TB) merupakan ancaman kesehatan global karena dapat meningkatkan morbiditas dan mortalitas TB di seluruh dunia. Persentase kematian pada pasien MDR-TB selama proses pengobatan juga masih tinggi dan beberapa negara menemukan prediktor kematian yang berbeda-beda. Hal ini akan mempengaruhi *survival status* pasien MDR-TB. **Tujuan.** Menganalisis *survival status* dan prediktor keparahan klinis pada pasien MDR-TB di Rumah Sakit Umum Pusat Persahabatan, Jakarta. **Metode.** Penelitian ini menggunakan desain studi kohort retrospektif terhadap pasien yang memulai pengobatan MDR-TB pada periode 2019-2021 yang dilakukan pada bulan Desember 2023 - Maret 2024. Waktu observasi dimulai dari sejak diagnosis MDR-TB ditegakkan dan memulai pengobatan sampai kejadian akhir terjadi (keparahan klinis/mortalitas) atau selama 24 bulan pengamatan. Data yang diambil terdiri dari 14 variabel dan diperoleh melalui rekam medik di rumah sakit. Data tersebut kemudian dianalisis dengan menggunakan perangkat lunak analisis data yaitu SPSS (*Statistical Product and Service Solutions*) versi 26. Analisis bivariat dilakukan dengan uji *log-rank* dan bermakna bila nilai $p < 0.05$. Analisis multivariat akan dilanjutkan bila variabel memiliki nilai $p < 0.25$ dan bermakna bila nilai $p < 0.05$. **Hasil.** Penelitian ini mengamati 244 pasien yang terdiagnosis MDR-TB dari tahun 2019-2021 dan diikuti selama 2 tahun dengan waktu keseluruhan *person-days of follow up* sebesar 113.281 hari. Pasien MDR-TB yang hidup selama pengobatan berjumlah 209 orang (85.6%) dan pasien yang meninggal berjumlah 35 orang (14.4%). *Median survival time to death* (IQR) pada pasien yang meninggal adalah 89 hari (32-577 hari). Prediktor keparahan klinis yang bermakna adalah status anemia (aHR 9.89; 95%CI: 2.3-42.6), status HIV reaktif (aHR 5.27; 95%CI: 1.17-23.72) dan Efek Samping Obat (ESO) berat (aHR 9.16; 95%CI: 4.19-20.0). **Kesimpulan.** Pengendalian prediktor seperti kegiatan skrining HIV, status anemia pada pasien TB, pemantauan aktif terhadap efek samping obat MDR-TB dan tatalaksana sejak dini sangat berperan dalam menurunkan mortalitas pasien MDR-TB.

Kata Kunci: *Multi-Drug Resistance Tuberculosis*, *survival status*, prediktor keparahan klinis, uji *log-rank*, analisis multivariat