LETTER TO THE EDITOR
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Treatment Outcomes of Patients with Multidrug-Resistant Tuberculosis: Concern to Bedaquiline

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We greatly appreciated the study by Kang et al.[1], which reported successful treatment outcomes and fewer cases lost to follow-up after implementing the public-private mixing period. The data were collected retrospectively over ten years. As we know, multidrug-resistant tuberculosis (MDR-TB) is still a complicated problem worldwide with a high level of treatment failure and mortality, including in Indonesia due to poor adherence and several adverse effects of the drugs. Kang et al.[1], also reported that MDR-TB patients with age older than 65 years old, low body mass index, history of tuberculosis (TB) treatment, bilateral lung lesions, and pre or extensively drug-resistant TB were significantly associated with treatment failure. Interestingly, the administration of bedaquiline or delamanid over 1 month was significantly associated with successful treatment (odds ratio, 5.939; 95% confidence interval, 1.680–20.991; $p<0.05$)[1]. In a large cohort by Franke et al.[2], 63% of the MDR-TB patients using bedaquiline, delamanid, or both experienced culture conversion within 6 months after the initiation of these drugs. Patients with human immunodeficiency virus (HIV) co-infection, high initial sputum smears, and cavitary lung disease had lower conversion rates than those without these risks. In our country, Indonesia, either bedaquiline or delamanid is used for 6 months if the patient is intolerant, contraindicated, or resistant to a fluoroquinolone or second-line injectable antituberculosis drugs. Fortunately, bedaquiline has been listed in the national program as a part of MDR-TB therapy in Indonesia, whereas delamanid has not[3]. However, studies on the efficacy and safety of bedaquiline for MDR-TB management in Indonesia are very limited. Although bedaquiline is well-tolerated, we should fully consider before administering it. The serious adverse effect of this drug, Frederica-corrected (QTcF) prolongation, should be closely monitored by the pulmonologist and pharmacist[4]. In Indonesia, a study by Soeroto et al.[5], reported that out of 492 MDR-TB patients, 50% of them were successfully treated. Culture conversion of sputum at less than two months was significantly more likely (2.79 times) to indicate successful MDR-TB treatment[5]. At the same time, chronic kidney disease, HIV, and cavitary lesion were risk factors of more prolonged treatment. Unfortunately, bedaquiline was not reported in that study[5]. Although bedaquiline or delanamid had beneficial effects in treating MDR-TB patients, other factors that may inhibit sputum conversion or prolong the duration of therapy should be considered while periodically supervising the side effects.

Authors' Contributions

Conceptualization: Putra ON, Hidayatullah AYN. Writing – original draft preparation: Putra ON, Hidayatullah AYN. Approval of final manuscript: all authors.

Conflicts of Interest

The authors declare no conflicts of interest regarding this study.

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