

Comparison of QTc interval changes in drug-resistant tuberculosis patients on delamanid-containing regimens versus shorter treatment regimens

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Abstract: BACKGROUND: Delamanid (DLM) is a relatively new drug for drug-resistant tuberculosis (DR-TB) that has been used in Indonesia since 2019 despite its limited safety data. DLM is known to inhibit hERG potassium channel with the potential to cause QT prolongation which eventually leads to Torsades de pointes (TdP). OBJECTIVE: This study aims to analyse the changes of QTc interval in DR-TB patients on DLM regimen compared to shorter treatment regimens (STR). METHODS: A retrospective cohort was implemented on secondary data obtained from two participating hospitals. The QTc interval and the changes in QTc interval from baseline (Δ QTc) were assessed every 4 weeks for 24 weeks. RESULTS: The maximum increased of QTc interval and Δ QTc interval were smaller in the DLM group with mean difference of 18,6 (95%CI 0.3 to 37.5) and 31.6 milliseconds (95%CI 14.1 to 49.1) respectively. The proportion of QTc interval prolongation in DLM group were smaller than STR group (RR=0.62; 95%CI 0.42 to 0.93). CONCLUSION: This study has shown that DLM regimens are less likely to increase QTc interval compared to STR. However, close monitoring of the risk of QT interval prolongation needs to be carried out upon the use of QT interval prolonging antituberculoid drugs.

Keywords: Anti-tuberculoid, pharmacovigilance, QT prolonged, long QT syndrome

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