Early safety and efficacy of Bedaquiline and Delamanid combination for drug-resistant TB in Armenia, India and South Africa

Ferlazzo G.; Mohr E.; Hewison C.; Jonckheere S; Khachtryan N; De Avezedo V.; Furin J.; Isaakidis P.

Background

Two new drugs, Bedaquiline (Bdq) and Delamanid (Dlm), are approved for treatment of drug-resistant tuberculosis (DRTB). Safety concerns have limited their use in combination for patients in need. Médecins sans Frontières (MSF) has introduced the combined use of Bdq and Dlm for patients with limited treatment options in 2016. We describe early safety and microbiological efficacy of regimens containing Bdq and Dlm in combination among patients in three epidemics hotspots, Armenia, India and South Africa.

Methods

This is a retrospective cohort analysis among patients who received the combination of Bdq and Dlm as part of their DRTB treatment regimen between January and August 2016. We report QTcF interval data, serious adverse events (SAEs), and early efficacy, during the first 6 months of treatment.

Results

Twenty-eight patients were included in the analysis. Median age at start of the combination was 32.5 years. Twenty-four (86%) patients had isolates resistant to fluoroquinolone agents; 14(50%) patients had XDR-TB. No patient experienced increase > 500 ms in QTc interval. Four patients experienced six instances of QTc increase >60msec from baseline; none of them led to permanent discontinuation of the drugs. Sixteen serious adverse events were reported among 7 patients. One patient, with advanced HIV, died during the study period, likely as consequence of immune inflammatory reconstitution syndrome (IRIS). Of the 23 individuals with positive baseline cultures, 17(74%) converted to negative by month 6 of treatment.

Conclusions

Early safety and efficacy results of the use of Bedaquiline and Delamanid in combination for the treatment of DRTB were promising and reassuring in this multicentric cohort of patients treated under programmatic conditions.