Oral regimen for multi-drug-resistant TB can promote patient-centred and community-based treatment

The WHO consolidated guidelines covering the treatment of drug-resistant tuberculosis has been released on June 15, 2020.[1] Its release was much anticipated since it was announced in a rapid communication issued in December 2019. The 2020 guidelines[1] are in continuation to the 2019 guidelines and the 2018 update for drug-resistant tuberculosis. The categorization of drugs based on their effectiveness is retained. Consequently, the basic principle of including all three group A agents—bedaquiline, levofloxacin/moxifloxacin, and linezolid, and at least one group B agent for a longer all-oral treatment has remained unchanged.

The main highlight of the new guidelines is the recommendation of a shorter all-oral bedaquiline-based regimen for 9–12 months for multidrug or rifampicin-resistant (MDR/RR) tuberculosis, which replaces the current shorter regimen with injectables. The need for a shorter all-oral regimen had been long-felt by experts.[2] In order to be eligible for this regimen, the patients should not have been exposed to second-line anti-tuberculosis drugs for more than 1 month and fluoroquinolone resistance should not be present. For patients demonstrating fluoroquinolone resistance, a three-drug regimen of bedaquiline, pretomanid, and linezolid (BPaL) has been proposed for 6–9 months. A cautious approach has been taken regarding the introduction of BPaL regimen by recommending it only in operational research settings and not directly in the routine program.

The use of bedaquiline in a shorter all-oral and experimental BPaL regimen is in addition to its prior inclusion in the longer all-oral regimen of a total duration of 18–20 months. Thus, bedaquiline has emerged as a key drug with its inclusion in all the standardized regimens for drug-resistant tuberculosis. Therefore, it is important to prevent the emergence of resistance to bedaquiline. Active drug safety monitoring (aDSM) should be rigorously implemented in addition to ensuring compliance to the correct drug dose.[1] Since bedaquiline has an initial high-loading dose for the first 2 weeks, patients need to be adequately counseled regarding the sharp reduction in the dose subsequently.[1]

Fluoroquinolones are widely used in South Asia in outpatient settings even for mild infections, leading to anti-microbial resistance.[3] The National Anti-Tuberculosis Drug Resistance Survey (NDRS) in India revealed that 21.8% of the patients with MDR-TB had additional fluoroquinolone resistance which is a cause for concern.[4] Therefore, the performance of the BPaL regimen for fluroquinolone-resistant MDR/RR-TB would be of crucial importance for its introduction in the national programs, especially for high-burden countries like India.

The daily intramuscular injections are not only poorly tolerated but also lead to significant out-of-pocket expenditure.[5,6] The current guideline has the potential to vastly improve compliance among drug-resistant tuberculosis patients with the use of all-oral regimens. Oral treatment can help improve primary care for MDR-TB patients in the community through directly observed treatment by involving the primary care physicians and supported by the frontline health workers. It would lead to better treatment coverage and reduce delays in initiating the treatment. The deployment of an oral regimen in the community would also require adequate focus on patient-support interventions. National programs should take the necessary steps to implement these guidelines for improving the care of drug-resistant tuberculosis patients.

Ethical approval

Not applicable since no participants were studied.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Received: 21-12-2020 **Accepted:** 16-06-2021
Published: 27-12-2021

Access this article online

Quick Response Code:

Website: www.jfmpc.com

DOI: 10.4103/jfmpc.jfmpc_2502_20

How to cite this article: Saurabh S, Bhardwaj P. Oral regimen for multi-drug-resistant TB can promote patient-centred and community-based treatment. J Family Med Prim Care 2021;10:4607-8.