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# Title: Efficacy and safety of the bedaquiline-pretomanid-linezolid regimen in the treatment of drug-resistant tuberculosis: A retrospective analysis

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**Statement of the Problem:** Drug-resistant tuberculosis (DR-TB) is still a significant global health threat. The appearance of MDR (multidrug-resistant) and XDR (extensively drug-resistant) has made treating DR TB more challenging. The WHO recommends a combination of at least four drugs for the treatment of MDR-TB, with a treatment duration of at least 20 months. However, long treatment duration, high pill burden, and toxicities are major challenges in the management of DR-TB. The bedaquiline-pretomanid-linezolid (BPL) regimen is a promising new treatment option for DR-TB that has shown high rates of success and minimal toxicities.

**Methodology & Theoretical Orientation:** A study looking back at earlier cases was performed on a group of individuals suffering from DR-TB who received treatment using the BPL regimen. The study included patients with MDR-TB and XDR-TB, and the treatment duration was 6 months. The primary outcome measures were culture conversion rate, treatment success rate, and safety profile. Adverse events were also monitored.

**Findings:** The culture conversion rate was 93.3%, and the treatment success rate was 89.7%. Most adverse events were minor, with only a small percentage of patients (2.3%) experiencing severe events of grade 3 or higher. The most common adverse events were nausea and vomiting, which occurred in 2.3% and 1.4% of patients, respectively. Furthermore, there were no fatalities that were attributed to the treatment.

**Conclusion & Significance:** The BPL regimen is a highly effective and well-tolerated treatment possibility for DR-TB. These results support the use of BPL as a first-line therapy for DR-TB. The shortened treatment duration and lower pill burden of the BPL regimen make it more feasible for patients, especially in resource-limited settings. Further studies are needed to confirm these findings in larger and more diverse populations and to evaluate the long-term outcomes of the BPL regimen. In addition, the cost-effectiveness of the BPL regimen needs to be evaluated and compared to other DR-TB regimens.

### Biography

Mr. Yadav is a highly skilled research assistant with expertise in evaluation and a passion for improving health in the field of multidrug resistant tuberculosis. He has made significant contributions to the field through his research "Challenges & Solutions for Recent Advancements in Multi-Drugs Resistance Tuberculosis: A Review." This paper presents new pathways for improving healthcare and understanding of treatment and diagnosis in MDR-TB. In addition to his work on this paper, Mr. Yadav has also conducted research using a rabbit model to monitor the secondary response against administer antigen followed by the validation of inject Ag concentration in-vitro. His dedication to understanding and combating MDR-TB makes him an invaluable asset to the research community.