Situational analysis of relapse tuberculosis cases in Kelantan state , Malaysia from 2017-2021

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ABSTRACT

Introduction: Relapse tuberculosis (TB) remains a critical threat to global public health concerns, posing a particular challenge due to its potential for increased drug resistance and treatment difficulties. This study aims to conduct a situational analysis of relapse tuberculosis in Kelantan, Malaysia, from 2017 to 2021. The objective of this study is to describe the magnitude, characteristics, and contributing factors associated with relapse TB cases in Kelantan, thereby providing insights for targeted interventions and strategies to reduce the burden of relapse TB. **Materials and Methods:** A cross-sectional study was conducted from 2017 to 2021 using secondary data from MyTB online system in Kelantan State, Malaysia. Relapse TB cases were identified and analysed descriptively using SPSS software version 25. **Results:** Between 2017 and 2021, there were 5598 TB cases registered in Kelantan, with 6.25% (95%CI:0.06,0.07) relapse TB cases. The trend of relapse tuberculosis prevalence has demonstrated a consistent decrease over the years. In 2017, the prevalence stood at 6.10%, slightly increasing to 6.33% in 2018. However, the numbers started to decline after that, with a prevalence of 6.87% in 2020 and a significant drop to 5.54% in 2021. Kota Bharu district recorded the highest relapse TB cases, 112(32%), followed by Pasir Mas 59(16.9%) and Tumpat district 40(11.4%). Most of the cases were Malaysians (98.3%), Malays (90.6%), and lived in rural areas (86.5%). Age of relapse TB cases ranged from 12 to 88 years old, with a mean age of 50.7 (SD 16.36). The majority of relapse TB cases were male (68.9%), had attained a secondary level of education (57.4%), were unemployed (59.7%), and prisoners (2.6%). Regarding clinical factors, most relapse TB patients were non-diabetic (69.1%), non-smokers (62.3%), HIV-negative (82.6%), had pulmonary tuberculosis (83.7%), PTB smear-positive (58.6%) and exhibited moderately minimal chest radiographic abnormalities (58.6%). For the treatment and outcome of relapse TB, most cases were receiving directly observed therapy, DOT (91.9%), non-multidrug resistant TB (97.4%), and successful outcome (75.1%). **Conclusion:** The prevalence of relapse tuberculosis (TB) remains high in Kelantan. Therefore, it is imperative to implement effective interventions and strengthen the TB control program to address the underlying factors contributing to relapse TB. These measures should be taken in the near future to reduce the burden associated with relapse TB in Kelantan.