

## ABSTRACT 13

**Radiographic Patterns and Progress Findings of Treated Smear Negative Pulmonary Tuberculosis (SNPTB) in Paediatric Population**Maliq Aziz<sup>1</sup>, Norafida Bahari<sup>2</sup>

**Objectives:** Tuberculosis (TB) remains a major global health challenge, second only to COVID-19 as the leading cause of death from a single infectious agent. In Malaysia, TB is endemic, with over 2,320 deaths reported in 2020. The country aims to reduce TB-related deaths to fewer than 85 annually by 2035. Diagnosing smear-negative pulmonary tuberculosis (SNPTB) is challenging due to the absence of detectable bacilli in sputum and the long incubation time needed for mycobacterial cultures. These factors cause diagnostic delays, leading to postponed treatment and increased transmission. Diagnosing TB in children is particularly difficult because it often presents like other common paediatric illnesses. Chest radiography is crucial in diagnosing and managing smear-negative TB in children, but its findings are often non-specific and easily missed by less experienced clinicians. This study aims to identify key chest radiograph details in smear-negative cases to improve diagnosis and treatment in children. **Methods:** This retrospective cross-sectional study spans three years and utilises chest radiographs from the Picture Archiving and Communication System (PACS) of HSAAS and HSIS. Frontal chest radiographs of paediatric SNPTB cases, obtained between 2019 and 2023, were reviewed by two independent radiologists to ensure accuracy and consistency. Clinical outcomes were collected and correlated with radiographic findings. The results were analysed and presented in tables and graphs. **Results:** Significant patterns were identified in the chest radiographs of paediatric patients with smear-negative pulmonary tuberculosis (SNPTB). **Conclusion:** Statistically significant SNPTB radiographic features can aid clinicians in diagnosing and case monitoring, leading to improved treatment outcomes for patients.

**Keywords:** Smear negative pulmonary tuberculosis, paediatrics, chest radiograph.

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