A study of drug compliance, HIV co infection and rifampicin resistance in tuberculosis patients in a tertiary hospital

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ABSTRACT

Introduction: Tuberculosis (TB) is an ancient infectious disease caused by the bacterium Mycobacterium tuberculosis (Mtb). Despite decades of research and advancements in its diagnosis and treatments, TB still leads among the causes of deaths from infectious diseases. Some key issues being prolonged treatment courses, inadequate drug intake, and the high dropout rate of patients during the treatment course. As per the World Health Organization (WHO) reports, about 8.5% of the multi-drug resistant tuberculosis (MDR-TB) cases were extremely drug-resistant (XDR), where resistance to two of the key second-line Mtb drugs is also present. At the same time, only 55% of the reported MDR-TB and 30% of the reported XDR-TB cases were treated successfully. **Objectives:** To study and evaluate age, gender, site involvement, compliance and Rifampicin sensitivity and incidence of HIV co-infection in Tuberculosis patients. **Materials and Method:** A case series, observational study was conducted in a government tertiary care hospital in Salem among patients registered under National Tuberculosis Elimination programme (NTEP) who attended the hospital between January 2020 to December 2023. Clinical examination and relevant investigations were carried out and rifampicin resistance, association with HIV and treatment default rate was studied. **Results:** There was an increase in number of cases detected each year, affecting all age groups with majority of the patients being males. In the study, 8510 cases were pulmonary tuberculosis and 3734 cases were extra pulmonary. Defaulters were 2%. Rifampicin sensitivity was 97.43% and resistance was found in 2.57% patients. HIV co-infection was found to be in 4.57% of patients. **Conclusions:** The study shows an increase in number of cases detected with majority of cases being males and primary infection being pulmonary tuberculosis. Treatment default rate was at 2%.