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Prevalence of multi-drug resistant tuberculosis and implementation of infection prevention steps in a tertiary care hospital in south Asia for M D R tuberculosis

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Multi Drug Resistance (MDR) in tuberculosis (TB) is a global threat especially in Immunocompromised patients with India and China carrying the greatest estimated burden of multidrug tuberculosis (MDR), multidrug-resistant (MDR) tuberculosis is defined as disease caused by strains of *Mycobacterium tuberculosis* that are at least resistant to treatment with Isoniazid and Rifampicin. WHO's refreshed policy document continues to strongly advise that Xpert MTB/RIF be used as the initial diagnostic test in both adults and children who are at risk of MDR-TB or HIV-associated TB, and that these two groups should be prioritized for testing with Xpert MTB/RIF when resources are limited. We Used Xpert MTB/RIF system in our Hospital to predict prevalence of MDR pulmonary TB in at risk population and thereby suggest Infection prevention measures to prevent the spread. The case finding for clinical tuberculosis was based on clinical history criteria defined according to WHO's guidelines for the programmatic management of drug-resistant TB. A total of 100 sputum specimens of patients >18 years of age and suspected of MDR pulmonary TB were followed over a period of 6 months. Average age of patients was 37 years and 52 specimens tested positive for pulmonary TB and rifampicin resistance was detected in 49% of positive cases indicating high prevalence of rifampicin resistance and thereby suggesting multi drug resistance. Rifampicin resistance is a reliable proxy for MDR-TB in patient groups in many countries. Based on the findings, the infection prevention department suggested the following infection prevention steps in chest and tuberculosis department of the hospital to prevent TB exposure to staff and patients, and to reduce the spread of infection by ensuring rapid diagnosis and treatment. They are: Screening of TB suspects or patients on TB medications, education of patients, separation of TB suspects from other patients, triaging, regular training programs, use of respirators (N-95) were promoted in bronchoscopy or specialized treatment centers and implementation of environmental measures. This study suggests that XpertMTB/RIF can be used as a rapid indicator of M D R tuberculosis in resource limited hospitals to enable smooth implementation of infection prevention measures.

Biography

Ruchi Girotra has her expertise in infection prevention and infectious diseases. She is currently working as a General Manager for Specialty Certified Medical Assistant (SCMA) and oversees the development of all study guides, exam content and other published materials for the medical assistance designation. She has also played an active role in initiation and maintenance of Joint commission international standards, safe healthcare practices, sterilization and disinfection, antibiotic stewardship programs in various hospitals. She has published several research papers in international and national medical journals.

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