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Primary anti-tuberculous drugs resistance of pulmonary tuberculosis in southwestern Saudi Arabia

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The emergence of drug-resistant tuberculosis (TB) is an increasing problem which adversely affects patient care and public health. This study aimed to determine the rates and patterns of primary anti-TB drugs resistance in Najran, Southwestern Saudi Arabia. The study included 80 smear-positive new pulmonary TB patients. Sputum samples were cultured on Lowenstein—Jensen and Middle-Brook 7H10 media. Mycobacterium tuberculosis susceptibility testing was done by the conventional agar proportion method for isoniazide (INH), rifampicin (RIF), streptomycin (SPM) and ethambutol (EMB). Out of the 68 *M. tuberculosis* isolates, 42 (61.8%) were sensitive to all 4 drugs and 26 (38.2%) were resistant to one or more drugs. The most common resistance was found to INH (33.8%), followed by RIF (23.5%), SPM (13.2%) and EMB (2.9%). Eight (11.8%) isolates were resistant to one drug, 14 (20.6%) were resistant to 2 drugs, 3 (4.4%) were resistant to 3 drugs and one (1.5%) was resistant to 4 drugs. Multi-drug resistant (MDR) isolates were found in 14 (20.6%) cases. In conclusion, the primary resistance rate to four first-line anti-tuberculous drugs and MDR-TB rate are worryingly high, representing an alarming situation in Najran. Further studies are necessary for continuous surveillance of *M. tuberculosis* resistance patterns.

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