

Presentation and outcome of culture-confirmed isoniazid-resistant rifampicin-susceptible tuberculosis in children

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Setting: Isoniazid-resistant rifampicin-susceptible (HRRS) tuberculosis (TB) is the most prevalent form of drug-resistant TB globally and may be a risk factor for poor outcomes. HRRS-TB in children has been poorly described.

Objective: To characterize the clinical presentation, treatment, and clinical and microbiological outcomes, and factors associated with poor outcomes among children with culture-confirmed HRRS-TB.

Design: Retrospective hospital-based cohort study.

Results: Of the 72 children included, median age 50.1 months (IQR 21.5- 102.5), 42% were male. Forty-four (51%) had a potential source case; only 13 were confirmed HRRS-TB. Twelve of 66 tested (17%) were HIV-infected, and 36 of 60

(60%) with pulmonary TB had severe disease. Seventy had treatment data; median total duration was 11.3 months (IQR 9-12.3); 25 (36%) initiated treatment with a 3-drug intensive phase; 52 (74%) received a fluoroquinolone. Of 63 with known outcome, 55 (88%) had a favourable outcome; 1 died and 3 had treatment failure. Ten had positive follow-up cultures at ≥ 2 months after starting treatment (17% of all PTB and 27% of those with follow-up culture data); older age ($p=0.008$), previous TB treatment ($p=0.023$) and severe PTB ($p=0.018$) were associated with failure to culture-convert at ≥ 2 months.

Conclusions: Although overall outcomes were good, prolonged culture positivity and cases of treatment failure emphasize the need for additional attention to clinical management of children with HRRS-TB.