

Rise in rifampicin mono-resistant tuberculosis in Western Cape

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Objectives: To verify the perceived increase in rifampicin mono-resistant TB (RMR-TB) in the Cape Winelands-Overberg region and to identify potential risk factors.

Design: Retrospective descriptive study of trends in RMR-TB over a 5-year period (2004-2008), followed by a case-control study of RMR and isoniazid (INH) mono-resistant TB (IMR-TB) cases, diagnosed from April 2007 through March 2009, to assess for risk factors.

Results: Total number of RMR-TB cases more than tripled, from 31 in 2004 to 98 in 2008. The calculated doubling time was 1.63 years (95% confidence interval [CI] 1.18-2.66). For risk factor assessment 95 RMR-TB cases could be objectively verified on genotypic and phenotypic analysis. Thirteen of 108 (12%) of specimens genotypically identified as RMR cases were misidentified multidrug-resistant (MDR) cases. On multivariate analysis, preceding use of antiretroviral therapy (odds ratio [OR] = 6.4, 95% CI 1.3-31.8), alcohol abuse

(OR = 4.8, 95% CI 2.0-11.3), and being 40 years of age and older (OR = 5.8, 95% CI 2.4-13.6) were significantly associated with RMR-TB.

Conclusion: RMR-TB is rapidly increasing in the study setting, especially among patients with advanced HIV disease. Routine drug susceptibility testing should be considered in all TB/HIV co-infected patients; absence of INH resistance should be phenotypically confirmed if genotypic RMR-TB is detected.

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