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ABSTRACT BOOK

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PS-95586-05 Extended susceptibilities of 281 XDR-TB and 5589 MDR-TB strains from patients in Peru

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Background: Tuberculosis drug resistance has increased in Peru from 3% of all cases in 1999 to 8% of all cases in 2006 and Peru has diagnosed more than 200 XDR-TB cases. We therefore studied MDR-TB and XDR-TB extended sensitivities in order to guide treatment.

Methods: All 5589 MDR-TB strains from 3870 patients and 281 XDR-TB strains from 173 patients identified by the Peruvian National reference laboratory system from January 2005 until December 2008 had extended drug-susceptibility testing by the proportions method (7H10 agar), with pyrazinamide susceptibility testing using the Wayne technique. The proportion of strains that were resistant (95% confidence intervals) are stated in the text and shown in the graph.

Results: MDR-TB patients were mainly male (61.6%) and 77.8% were from Lima. Most MDR-TB strains were also resistant to pyrazinamide or ethambutol. Two thirds of MDR-TB was resistant to streptomycin. Of the MDR-TB strains, 8.0% (7.2–8.8%) were resistant to ciprofloxacin and 5.0% (4.7–6.1%) were XDR-TB. 26.0% of MDR-TB strains were fully sensitive to all other drugs tested. 64% of XDR-TB patients were male and 93% were from Lima. Most XDR-TB strains were resistant to most drugs including ethionamide or kanamycin or capreomycin. In contrast, amongst the XDR-TB strains, only 4.6% were resistant to cycloserine and 21.5% were resistant to PAS.

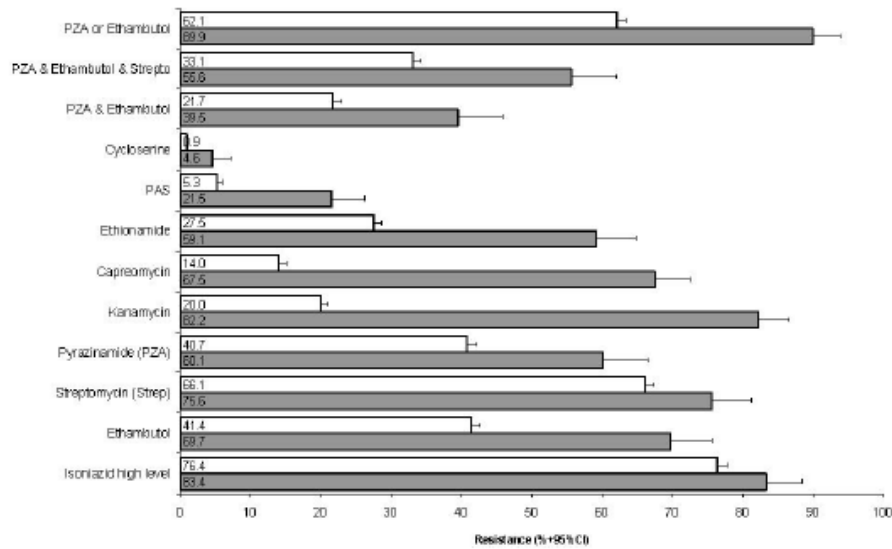


Figure MDR-TB (white) and XDR-TB (gray) resistance patterns.

Implications: Resistance to streptomycin was frequent. Most MDR-TB was also resistant to ethambutol or pyrazinamide and therefore requires specific therapy and should not be treated with first-line drugs alone. MDR-TB resistance to ciprofloxacin was rare and MDR-TB and XDR-TB resistance to cycloserine

and PAS were uncommon. These resistance profiles should be used to guide appropriate therapy for patients awaiting drug-susceptibility testing results.