

Oral presentation

O411 HIV-TB co-infection and TB drug resistance: an emerging threat to HIV and TB programmes

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M TB currently infects ~2 billion people, one-third of the world's population. Eight million new active cases occur worldwide annually, more than at any previous time in history. In addition, 14 million people are believed to be co-infected with TB and HIV. In Africa, rising rates of TB are clearly related to and a consequence of the devastating co-existing HIV/AIDS epidemic. In the countries of the former Soviet Union, and in many of the most populous countries of Asia, already high TB infection and disease rates may be further exacerbated as the full force of emerging HIV/AIDS epidemics are experienced. In this context, resistance to drugs used to treat M TB has emerged as an increasingly serious global public health emergency. WHO surveillance over the past decade has shown growing rates of TB drug resistance, including multi-drug resistant (MDR-TB), defined as resistance to isoniazid and rifampin and newly defined extensively drug resistant (XDR-TB), defined as MDR plus resistance to fluoroquinolones, and at least one second-line injectable drug. WHO estimated ~500,000 and 40,000 worldwide incident cases of MDR and XDR TB in 2006, respectively. The recent report of XDR-TB in HIV co-infected patients in South Africa has dramatically accelerated global awareness of drug-resistant TB. Resistance may result either from episodes of TB treatment failure or transmission of resistant organisms. In either case, diagnosis is problematic, treatment options markedly limited and high rates of treatment failure and mortality occur, each further exaggerated by HIV co-infection. In sub-Saharan Africa, the combination of a huge population of HIV-infected susceptible hosts, poor TB treatment success rates, lack of airborne infection control, limited drug-resistance testing, and an overburdened TB and MDR TB treatment programs, has provided ideal conditions for an MDR and XDR TB epidemic of unparalleled magnitude. M and XDR TB pose great threats to individual patients and challenges

to the success of TB control programs and HIV/AIDS treatment programs. This presentation will review drug-resistant tuberculosis globally, with particular reference to South Africa, describe its interaction with the HIV epidemic and resultant consequences, and suggest measures necessary for controlling MDR and XDR TB in this context. A successful clinical and public health response necessitates infusion of new resources, earlier case finding, attention to airborne infection control, new TB diagnostics and therapeutics and development of new strategies, including increased collaboration between TB and HIV programs.