

ORAL PRESENTATION

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Human immunodeficiency virus coinfection with drug-resistant *Mycobacterium tuberculosis*

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From The 9th Edition of the Scientific Days of the National Institute for Infectious Diseases Prof Dr Matei Bals Bucharest, Romania. 23-25 October 2013

Background

Tuberculosis (TB), one of the oldest infectious diseases known to mankind, is a major cause of death for human immunodeficiency virus (HIV) infected people. Since 2008, the HIV/AIDS Mureş Regional Centre has been monitoring the increase in cases of HIV-TB with drug-resistant mycobacteria (MTB). We have decided to analyze particular aspects of this phenomenon.

Methods

Retrospective cross-sectional study performed in the Infectious Diseases Clinic I Tîrgu Mureş during the period of 2008-2012. The study included HIV positive patients diagnosed with drug-resistant tuberculosis (TB-R). We monitored epidemiological and clinical data as well as the evolution of the disease. We compared the results with those of patients diagnosed during the period of 2003-2012 with HIV-drug-sensitive TB (TB-nR). For statistical analysis we used the Fisher and T tests.

Results

83 patients were diagnosed with HIV-TB-nR with an average age of 23 years. 36 were without antiretroviral therapy (ART), with a CD4 count of 198 cells/ μ L; 73% were adherent to ART, 32% have deceased. 25 patients were diagnosed with HIV-TB-R (with an average age 25.6 years, over 50% were male) 7 of which were MDR, 11 pre-XDR, 7 XDR. Most cases of HIV TB-R were recorded in 2011, (8 cases of which 2 MDR, 6 pre-XDR). The patients suffered predominantly from secondary pulmonary TB (22) but also from extra pulmonary TB like meningoencephalitis (8). Resistance to isoniazid and rifampin was 100% (MDR), resistance to ethambutol 66.97%, 62.96% to

streptomycin, 33.33% to kanamycin, 55.56% to quinolones. All strains maintained their sensitivity towards ethionamide, cycloserine, para-aminosalicylic acid. Hospitalization periods for patients with MDR were significantly longer (68 days) than those of patients without MDR (44 days): T test $p=0.0045$. The adherence to ART of TB-R patients was much lower than that of TB-nR patients (odds ratio 2.12, Fisher test $p=0.04$). We have not found significant statistical difference between CD4 lymphocyte numbers in MDR (140 cells/ μ L) and non-MDR patients. Drug-resistance has had significant statistical influence over the mortality rate of patients (odds ratio, 3.11, Fisher test $p=0.019$).

Conclusion

The incidence of HIV-TB-R is increasing with long hospitalization periods, difficult therapy, low adherence and high mortality rate.

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Published: 16 December 2013

doi:10.1186/1471-2334-13-S1-O8

Cite this article as: Zaharia-Kézdi et al.: Human immunodeficiency virus coinfection with drug-resistant *Mycobacterium tuberculosis*. *BMC Infectious Diseases* 2013 **13**(Suppl 1):O8.

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