

Poster presentation

## Clinical epidemiology of HIV and tuberculosis co-infection in Galati, Romania

M Arbune\*<sup>1</sup>, C Scorpan<sup>2</sup> and OE Benea<sup>3</sup>

Address: <sup>1</sup>Infectious Diseases Hospital Galati, Galati, Romania, <sup>2</sup>Pneumophysiology Hospital, Galati, Romania and <sup>3</sup>Infectious Diseases Institute, Bucharest, Romania

\* Corresponding author

from Ninth International Congress on Drug Therapy in HIV Infection  
Glasgow, UK. 9–13 November 2008

Published: 10 November 2008

*Journal of the International AIDS Society* 2008, **11**(Suppl 1):P261 doi:10.1186/1758-2652-11-S1-P261

This abstract is available from: <http://www.jiasociety.org/content/11/S1/P261>

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### Purpose of the study

A peculiar HIV epidemic has evolved in Romania since 1990. HIV screening of TB patients is usual practice starting from 1998. In comparison to national statistics, Galati county has similar prevalence for HIV/AIDS (50/100,000 vs. 60/100,000) but higher for TB (163.7/100,000 vs. 110.1/100,000). The purpose of the study is to assess the epidemiology and clinical characteristics of HIV tuberculosis co-infection (HIV/TB) in Galati, Romania.

### Methods

The method used was a retrospective analysis study on HIV/TB patients followed up for at least 12 months after TB diagnostic in the Infectious Diseases Hospital, Galati, during 1998–2008.

### Summary of results

A number of 98 HIV/TB from 272 HIV cases was recorded. The average yearly incidence of TB was over 30 times higher in HIV-positive (5.2%) than in HIV-negative patients and tends to grow. The general characteristics of the patients are: male (57%), rural area (54%), median age 12 [1; 57] on HIV diagnostic time and 14 years old [2; 57] on TB diagnostic time. HIV was acquired vertically (11%), sexually (19%) or horizontally during early childhood (70%). 8% of cases had history of TB before 1998. 44% had TB as the primary AIDS-defining event; 26.5% developed TB after HIV diagnosis. 45% cases had extra-pulmonary TB involvement and are related to lower CD4 count (median 77/uL vs. 233/uL,  $p < 0.001$ ), older age (median 16.5 vs. 14,  $p = 0.002$ ) and mortality rate ( $p <$

0.001). 50% had microbiological criteria for TB diagnosis. Rate of microbiological evidence is lower in primary than in secondary pulmonary TB (OR = 120.75) and is related to smaller age. 27% patients received antiretroviral treatment (ARV) at the time of TB diagnosis and two developed TB as immune reconstruction event. Anti-TB treatment was associated with ARV on 61% (20% PI and 41% INNRT). Progression of immunologic suppression was recorded after TB in 41% patients. From 98 HIV/TB patients, 67 were cured, 11 relapsed and 21 died. Risk of death is related to severity of immunosuppression on TB diagnostic time (median CD4 count 219 in survivors vs. 42 in dead,  $p < 0.001$ ).

### Conclusion

The conclusions of the study are: 1. HIV/TB co-infection has high incidence, especially in adolescents, while HIV/TB co-infection is diagnosed late and has a poor prognosis; 2. The risk factors for death in HIV/TB co-infection are low CD4, extra-pulmonary involvement and older age; 3. A new strategy for improvement of TB diagnosis in HIV patients should allow earlier medical involvement in order to decrease HIV-TB mortality in Galati, Romania.

### References

1. WHO report: **Global tuberculosis control: surveillance, planning, financing**. Geneva: World Health Organization; 2007. (WHO/HTM/TB/2007.376)