Characteristics of tuberculous meningitis in HIV-infected patients

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Background
Tuberculous meningitis (TBM) has a substantial mortality even with anti-tuberculous treatment, in HIV-non-infected patients. Purpose of the study. The objectives were to describe clinical and laboratory differences of TBM in HIV-infected versus HIV non-infected patients and to assess risk factors of death in HIV-infected patients.

Methods
We retrospectively analyzed patients admitted to four infectious diseases hospitals in Romania, between 2001 and 2011, with TBM. Patients were defined as having TBM according to a consensus definition published by Marais et al. [1] and further divided into three categories of TBM (definite, probable and possible).

Results
We identified 162 patients with TBM of which 47 (29%) tested positive for HIV infection. Sixty-six patients had definite, 53 probable and 43 possible TBM. Out of the 47 HIV-infected patients 25 had definite, 17 probable and 5 possible TBM. TBM in HIV-infected patients vs. HIV non-infected patients was significantly associated in multivariable analysis with younger age (p = 0.01), in-hospital mortality (p < 0.001), absence of meningeal syndrome (p = 0.021), and absence of cranial nerve palsy (p = 0.036). HIV-infected patients who died had a median CD4 count of 61 cells/mm3 (IQR 21-132) vs. 135 cells/mm3 (IQR 61-255) in patients who survived (p = 0.014). HIV infection was diagnosed before TBM episode in 35 (75%) patients. Twenty-four (51%) HIV-infected patients had concomitant extra-central nervous system tuberculosis.

Conclusions
HIV infection is associated with increased mortality in patients with TBM. Most of our patients with TBM were late presenters. Death in HIV infected patients was associated with a lower median CD4 count.

Reference

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