

Cryptococcosis in HIV Infected Patients in Latvia: 100 Years after the Discovery of *Cryptococcus neoformans*

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Introduction. Cryptococcal meningitis (CM) is a major cause of death among human immunodeficiency virus (HIV)-infected patients, and the first most common opportunistic disease among AIDS cases in Latvia. Cryptococcal antigenemia (CA) in the absence of CM can represent early-stage cryptococcosis during which antifungal treatment might improve the outcome. However, patients without meningitis are rarely tested for cryptococcal infection.

Aim. The aim of the study is to evaluate cryptococcosis in hospitalised HIV-infected patients and assess clinical characteristics associated with positive cryptococcal antigen (CrAg+).

Material and Methods. 314 HIV infected patients hospitalised between January 2014 and December 2014 at LIC were included for analysis. The retrospective study was conducted in 2014. The diagnosis of cryptococcosis was performed according to EORTC/MSG criteria (2008).

Results. 314 HIV infected patients hospitalised from January 2014 through December 2014 at LIC were observed for the presence of CrAg. CrAg+ was found in 31 HIV-infected patients (9.9%). Mean age of patients was 37.5 years (range 23–54), 65% were males. 29% of the patients had hepatitis C virus co-infected, 65% were intravenous drug users. The median of CD4+ cell count in these patients was 128 (5–986) cells/ μ L. 84% of patients had CD4+ cell count < 200 cells/ μ L, 73% of them < 50 cells/ μ L. Log viral load was 5.94% of serum samples, 13% of bronchoalveolar lavage fluid (BAL) samples and 23% of cerebrospinal fluid (CSF) samples were positive in 'Pastorex Crypto-Plus' test (Bio-Rad). In none of the samples *Cryptococcus neoformans* was detected by fungal culture. 36% of CrAg+ patients were with clinical signs of infection with the main locations – CNS and lungs. CSF characterised with lymphocytic pleocytosis with the average 74 cells/ μ L. The average of glucose in CSF was 1.65, of protein – 0.94, of chloride – 122.4. Of 31 CrAg+ patients with medical charts available, 5 (16%) had evidence of past CrAg+. Antifungal therapy of cryptococcosis was performed in all patients with fluconazole. Combination therapy was performed for 26% patients (amphotericin B + fluconazole), 16% of patients in addition received corticosteroids. 62% patients were HAART treatment-naïve and 28% receive HAART. The mortality rate among the relapse group was high (23%).

Conclusion. Health care providers should evaluate HIV-infected patients for cryptococcal antigenemia, even in the absence of meningitis. Occult cryptococcal antigenemia occurs commonly among hospitalised HIV-seropositive patients. CrAg testing should be considered in hospitalised HIV-seropositive patients with CD4 count < 200 cells/ μ L.