# 4th Central and Eastern European Meeting on Viral Hepatitis and HIV

**11 – 12 October 2018, Prague, Czech Republic**

# Abstracts

40

# Risk Factors for Tuberculosis-Associated Immune Reconstitution Inflammatory Syndrome in Patients Coinfected With HIV, Tuberculosis and Chronic Hepatitis C

Golubovskaya O[1], Sukach M[1], Bezrodna O[1], Kondratiuk L[1], Kuliesh O[1], Pronyuk K[1], Vinnytska O[1]

[1]*O.O.Bogomolets National Medical University, Kyiv, Ukraine*

**Background:** Paradoxical tuberculosis-associated immune reconstitution inflammatory syndrome (TB-IRIS) is an immunopathological reaction occurring in 4-54 % patients who start antiretroviral therapy (ART) while on treatment for tuberculosis (TB). Mortality directly caused by TB-IRIS is not frequent, however, it causes substantial morbidity, necessitating hospitalisation and health care utilisation for diagnostic and therapeutic procedures. We conducted this study to determine the incidence and risk factors for TB-IRIS in patients coinfected with HIV, tuberculosis and chronic hepatitis C (CHC).

**Methods:** The study was conducted at the ID Department of O.O.Bogomolets National Medical University and included 86 patients coinfected with HIV, tuberculosis and CHC: 25 women (29.1%) and 61 men (70.9%), mean age was 36,3±3,8 years. HIV infection was diagnosed with the detection of HIV antibodies (ELISA and Western blot) and HIV viral load (PCR). CHC was confirmed by detection of HCV RNA (PCR) and antibodies (ELISA). Diagnosis of pulmonary and extra-pulmonary TB was confirmed according to medical history, clinical data, results of X-ray or CT scan, bacteriological tests and histological examination of biopsy samples of lymphatic nodes. Descriptive statistics of frequency distributions, summary measurements and variability measurements was used. Multivariate analysis was used to assess the association of each factor with the development of TB-IRIS.

**Results:** TB-IRIS was observed in 18 patients (20.9%) after administration of ART. In the majority of cases (in 11 patients - 61.1%) TB-IRIS developed within the first month after starting ART, in 5 patients (27.8%) - during 5-8 weeks after its initiation and in 2 patients (11.1%) - after 8 weeks of ART. Early ART initiation was the only risk factor for TB-IRIS ($\chi2=4.982$, $p<0.05$). The other factors that were assessed in the study (extrapulmonary tuberculosis - $\chi2=0.510$, bacterioexretion and/or pulmonary destruction - $\chi2=0.073$, other severe opportunistic infections - $\chi2=0.427$, low CD4+< 200/µl at the baseline - $\chi2=0.902$) did not increase the risk for TB-IRIS ($p>0.05$).

**Conclusions:** TB-IRIS was observed in 20.9% patients coinfected with HIV, TB and CHC and in most cases (61.1%) it developed within the first month after starting ART. Early ART initiation was the only risk factor for TB-IRIS ($\chi2=4.982$, $p< 0.05$). The other factors that were assessed in the study (presence of extrapulmonary tuberculosis, bacterioexretion and/or pulmonary destruction, other severe opportunistic infections and low CD4+< 200/µl at the baseline) did not increase the risk for TB-IRIS.