Hepatitis B, C and D co-infection in a Cohort of HIV-1 Infected Romanian Children and Adolescents

- Dr. “Victor Babes” Hospital of Infectious and Tropical Diseases, Bucharest, Romania -

Introduction:
- At the end of 2006, Romania reported 11872 paediatric HIV / AIDS cases [1]. Most of this children acquired HIV infection by horizontal route between 1987-1990.
- Because of the common route of transmission, this group of population may also be at risk for infection with hepatitis B, C and D viruses.
- Approximately 10% of HIV infected patients worldwide are HBSAg(+), 5% are co-infected with Delta virus (HDV) and 25-30% are co-infected with C virus HCV [2].
- The prevalence hepatitis markers in the HIV-uninfected Romanian young group population is 7% for hepatitis B and 1.6% for hepatitis C [3].

Objectives:
- Primary Objective:
  - The aim of the study was to assess the prevalence of viral hepatitis markers in a cohort of HIV-1 infected Romanian children and adolescents.
- Secondary Objectives:
  - To estimate the cases of chronic hepatitis B with active replication.
  - To determine the presence of occult B infection.
  - To evaluate the influence between HIV and hepatitis B virus.

Methods:
- Design: retrospective, single centre cohort study.
- Setting: Dr. V. Babes Hospital of Infectious and Tropical Diseases, Paediatric HIV / AIDS Department.
- Patients: HIV-1 infected children and adolescents analyzed for serological and viral hepatitis markers.
- HBV-DNA and HCV-RNA were performed with Cobas Amplicor HBV and HCV Monitor test - threshold 60 Ul/ml respectively 600 Ul/ml.
- Statistical analyses - were based on Chi-square and Fisher’s tests.

Epidemiology of viral hepatitis and HIV co-infection in children admitted in Dr. V. Babes Hospital

HBV-DNA levels in patients with detectable B viremia

Viral hepatitis markers in HIV Infected Romanian children and adolescents

Conclusions:
- The prevalence of HIV / HBV co-infection was 4 fold higher than the prevalence of HBV mono-infection in the Romanian population (same age group).
- HBV replicative infection was frequent and the B viral load was very high.
- We did not find occult HBV infection in our cohort, probably due to effective immune response and / or 3TC treatment.
- The rate of HIV / HCV co-infection was low.
- Hepatitis D super-infection seems to be increasing in a young population with high risk to sexual and intravenous drug exposure.
- The anti-HBV vaccination of the susceptible HIV infected young population is mandatory.

References: