

hepatitis co-infection liver damage was also caused by other reasons: 60% had history of drug using, drug toxicity or opportunistic infections. 30% of all patients were receiving ART, 65% were exposed to TB therapy.

**Conclusion:** Results of the performed analysis show that co-infection of HIV / AIDS with viral hepatitis B and C is presented in significant part in total mortality structure. This trend is existing currently and during recent years. The presence of co-infection complicates the course of both infections and promotes more rapid progression of liver disease. The risk of unfavorable outcome is increased by such factors as drug use or use of hepatotoxic medicine. It is necessary to pay more attention to timely diagnosis of HIV / hepatitis B co-infection with the purpose of timely treatment of the patients.

*No conflict of interest*

## Abstract: 17

*Treatment Issues - Hepatitis \_ HIV coinfection*

### Influence of antiviral therapy of HIV infection on prevalence of markers of viral hepatitis B and C

*L.R. Shostakovych-Koretskaya<sup>1</sup>, A.V. Cherginets<sup>1</sup>, V.V. Mavrutenkov<sup>1</sup>, Z.O. Chykarenko<sup>1</sup>, O.P. Shevchenko<sup>1</sup>, I.V. Budayeva<sup>1</sup>, V.P. Dyadik<sup>1</sup>, A.O. Lesnichaya<sup>2</sup>*

*<sup>1</sup>Dnipropetrovsk Medical Academy, Infectious Diseases, Dnipropetrovsk, Ukraine; <sup>2</sup>Municipal center for HIV management and prophylaxis, Infectious Diseases, Dnipropetrovsk, Ukraine*

**Background:** With appearance of antiretroviral therapy (ART), the life quality and length of HIV infected patients has significantly improved. Patients co-infected with HIV / HBV receive ART scheme including nucleoside reverse transcriptase inhibitors (NRTI), 3TC and TDF, with regard to their effect on hepatitis B virus. However NRTI are not acting on hepatitis C co-infection. So, this category of patients requires additional antiviral drugs. To plan the financial costs of the State Program 'Antihepatitis' and

optimize the management of patients with HIV / viral hepatitis co-infection on ART, it is necessary to study the spread of these conditions and their structure in the cohort.

**Materials & methods:** We analyzed the prevalence of serological markers of HBV and HCV in a cohort of 501 patients with confirmed HIV infection in our clinic.

All patients were conducted clinical and laboratory examination, which included evaluation (CD4), HIV RNA load, biochemical tests, serological markers of opportunistic infections and viral hepatitis B (HbsAg, HbeAg, Ab HBeAg), C (Ab HCV), Ab to hepatitis D. According to WHO classification, 1<sup>st</sup> disease stage was diagnosed in 9 patients (1.8%), 2<sup>nd</sup> in 49 (9.8%), 3<sup>rd</sup> in 164 (32.7%), 4<sup>th</sup> in 279 (55.7%).

**Results:** Chronic liver diseases were revealed in 167 patients (33.3%): HCV markers in 53 (10.6%), of hepatitis B in 15 (2.3%), of hepatitis B + C in 48 (9.6%), of hepatitis of unknown etiology in 44 (8.8%), of liver cirrhosis in 7 (1.4%). Patients with viral hepatitis B and C were divided into 2 groups: receiving ART for at least 2 years (1<sup>st</sup> group, n = 62), without ART (2<sup>nd</sup> group, n = 41). The 1<sup>st</sup> group patients received schemes of ART which included NRTI, lamivudine and tenofovir (3TC and TDF). Comparative analysis showed that viral markers of hepatitis B and C are found in 1<sup>st</sup> and 2<sup>nd</sup> groups with different frequency. The prevalence of chronic hepatitis B markers among 1<sup>st</sup> group is 2.9%, which is almost 9 times lower than in the 2<sup>nd</sup> group (19.1%) (p<0.05). Spread of HCV in both groups (36.8% and 41.2% respectively) significantly exceeded prevalence of HBV (P <0.05). At the same time, the frequency of HCV frequency was mainly similar between 1<sup>st</sup> and 2<sup>nd</sup> groups.

**Conclusion:** It was shown that co-infection of HIV / hepatitis occurs in more than 1/3 of patients. The structure of HIV / hepatitis co-infection in the total cohort shows prevalence of HCV-infection. Less frequently mixed infection (HBV + HCV) and mono-infection are seen. The prevalence of chronic hepatitis B was significantly lower in patients receiving ART, which indicates the effectiveness of ART in two directions, to restrict replication of HIV and HBV. Obtained results allow more effective management of patients with HIV / HCV and/or HBV co-infection.

*No conflict of interest*

**Abstract: 18***Treatment Issues - Hepatitis \_ HIV coinfection***Effectiveness of the medicine ribonucleic acid in patients with HIV and cirrhosis C***I. Hrvzhak<sup>1</sup>, O.Y. Pryshlyak<sup>1</sup>, M.Y. Pereklita<sup>1</sup>**<sup>1</sup>Ivano-Frankivsk national medical university, infectious diseases and epidemiology, Ivano-Frankivsk, Ukraine*

**Background:** Viral hepatitis C is a common comorbidities in HIV-infected individuals. In terms immunodeficiency virus C replication increases, leading to rapid progression of liver cirrhosis [Sulkowski WS, Mehta SH, Torbenson MS, et al., 2007]. The advent of potent ART has modified the main causes of morbidity and mortality in HIV-infected persons. Non-AIDS conditions are now replacing opportunistic infections and malignancies as the majority for HIV-infected patients [Deeks SG, Phillips AN, 2009]. It showed that chronic hepatitis C is the main factor responsible for the unfavourable and fatal outcome in the patients under regular medical care [Paula Tuma, Jose Medrano, Salvador Resino et al., 2010]. The low number of CD4 + T lymphocytes, male gender, older age, alcohol abuse are aggravating factors on the course of chronic hepatitis C and accelerate its progression to liver cirrhosis and hepatocellular carcinoma [Clinical protocol for diagnosis and treatment of hepatitis C in adults with HIV, MH Ukraine, 2008, p. 3]. Objective: To investigate the effect of the drug ribonucleic acid to improve the functional state of the liver in HIV-infected persons with viral C cirrhosis.

**Material & Methods:** Under the supervision were 24 HIV-infected persons aged 36-54 years with chronic hepatitis C viral cirrhosis classes A - 4 patients and B - 20. Functional status of liver was determined by the parameters pigment metabolism, cholestasis and cytolysis (bilirubin, alkaline phosphatase, cholesterol, prothrombin index, albumin, ALT, AST). Digital material were worked on the program Exeel using t Student's criteria for small sample.

**Results:** In complex pathogenetic therapy the patients received a drugs arginine glutamate (Glutargin), silymarin (Carsil), detoxification infusion therapy, veroshpiron used if the

presence of ascites. In addition 12 patients who had cirrhosis classes A - 2 persons and B-10 received drug ribonucleic acid (Nuklex, producer Ukraine) 2 capsules three times a day - 30 days. In patients who received only basic therapy (12 patients with cirrhosis: A – 2 person and B – 10) functional state of the liver improved to 25-38 days of treatment - disappear ascites, jaundice decreased symptom, patients feel slightly upgraded. Some indexes were retained at elevated level: bilirubin-  $86,53 \pm 11,91$  mmol/L, ALT -  $109,2 \pm 13,4$  U/L, alkaline phosphatase  $438,17 \pm 52,82$  U/L, but prothrombin index ( $69,90 \pm 3,27\%$ ) and albumin ( $24,08 \pm 3,18$  g / l) were decreased. However, in patients were treated with ribonucleic acid the symptom of jaundice decreased at the 9-15 days of treatment, the ascites significantly reduced in the same term. After the treatment the some biochemical parameters were closer to normal than in patients with the comparison group. The level of bilirubin was  $45,27 \pm 11,91$  mmol/L,  $P < 0,05$ ; ALT -  $69,2 \pm 8,26$  IU/L,  $P < 0,05$ ; alkaline phosphatase -  $241,54 \pm 18,72$ ,  $P < 0,05$ ; prothrombin index  $76,90 \pm 2,93\%$ ; albumin -  $34,08 \pm 3,31$  g/L,  $P < 0,05$ .

**Conclusion:** Use the drug ribonucleic acid as a part of pathogenetic therapy of HIV-infected patients suffering from viral C cirrhosis improves the functional state of the liver.

*No conflict of interest***Abstract: 19***Treatment Issues - Hepatitis \_ HIV coinfection***Faster HIV progression and development of HCV coinfection among PWID in Ukraine: retrospective cohort study**