

iSIC
2018

Kharkiv
Ukraine

ABSTRACT
BOOK





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Iliukha S.

HIV/HCV CO-INFECTION IN HIGH RISK GROUPS AND WAYS TO CONTROL ITS SPREADING

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Introduction. "Nowadays, diseases which are caused by Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV) are the most important issues for the healthcare services worldwide. Because of common transmission routes and groups of high risk of HIV/HCV co-infection has a high importance. And according to World Health Organization (WHO) data it makes the risk of transmission higher. So that, programs of preventing spreading HIV and HCV among high risk groups and treating of infected people are accepted at the international level. Due to new effective medications it is becoming possible to take under control replication of HIV and it is possible to decrease likelihood of its transmission. New anti-HCV drugs allow us to treat patient with 95% of efficiency (WHO, 2017). Our aim was to determine the prevalence of HIV/HCV co-infection worldwide in high risk groups and to find out the key groups for preventative programs implementation."

Materials and methods. Ministry of Health of Ukraine, Centers for Disease Control and Prevention (CDC), The Joint United Nations Programme on HIV and AIDS (UNAIDS), WHO, United Nations Office on Drugs and Crime (UNODC) and PubMed data were used.

Results. "According to UNAIDS data it estimates around 36.7 mln (30.8 mln - 42.9 mln) people with HIV in 2016. The prevalence of HIV cases among adult (15-49 y.o.) population was 0.8% according to WHO. Around 71 mln people infected with HCV were estimated by WHO and prevalence of HCV was 1%. Likelihood of defining HCV in patients with positive HIV status is 6 times higher than in HIV negative ones. Average prevalence of HIV/HCV co-infection in HIV positive patients (WHO) is 6.2%, in absolute units it is 2278400 people, and 59% of them are people who inject drugs (PWID), in absolute units it is 1362700 people. Proportion of HIV/HCV co-infection in high risk groups in all HIV infected people is: pregnant or heterosexually exposed samples – 4.0%, men who have sex with men (MSM) – 6.4%, PWID – 82.4%, in general population – 2.4%. In Ukraine the prevalence of HCV/HIV co-infection in newly HIV-infected individuals was estimated about 28.8% in 2016. In 2012 WHO, UNAIDS and UNODC offered a Comprehensive Package of interventions for the prevention, treatment and care of HIV among PWID. The first four – needle and syringe programmes (NSPs), opioid substitution therapy (OST), HIV testing and counseling (HTC) and antiretroviral therapy (ART) are the most important to the national healthcare programs to prevent spreading HIV



infection. Effectiveness of implementation of OST and reduced risk of HIV transmission among PWID has been shown."

Conclusion. Prevalence of HIV/HCV co-infection in people with HIV remains high especially in groups of high risk. The highest rate of HIV/HCV co-infection was registered in PWID. Effectiveness of preventative programs of screening and treatment of patients in target groups has already been shown. Therefore, these programs should be implemented in all countries.

Ippolitov D.

IRON METABOLISM INDICES IN CHRONIC HEPATITIS C PATIENTS

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Introduction. It is well known that excessive accumulation of iron is a common problem among patients with chronic liver diseases and accompanying iron metabolism disorders. So, the reason of the following research is to evaluate the state of iron metabolism in patients with chronic hepatitis (HCV).

Materials and methods. 22 chronic HCV patients were examined with subsequent measurement of following indices: 1. Viral load and genotype of the virus 2. Alanine transaminase (ALT) level 3. Serum iron level 4. Total iron-binding capacity (TIBC) 5. Transferrin saturation (TFS) index. Statistical analysis of obtained data performed using standard MS Office Excel tools, data reliability checked using Student's t-test.

Results. Serum iron level was elevated in 14 patients which makes up 64% of total, TIBC level was elevated in 15 patients - 68% of total and TFS index was raised in 3 patients – 14% of total. Listed values are $35,5 \pm 3,89 \mu\text{mol/L}$, $p < 0,01$; $103,6 \pm 7,74 \mu\text{mol/L}$, $p < 0,01$; $36,07 \pm 5,27\%$, $p < 0,05$ respectively. TFS index was lowered in 3 patients – 14 % and within normals in 16 patients – 72%. Correlation analysis between levels of serum iron and ALT showed the presence of a strong direct connection between these indices ($r = 0,5$, $p < 0,01$). Any dependency between the serum iron level and age, sex, viral load and viral genotype of patients was not established.

Conclusion. In most patients elevation of the serum iron level (64%) and TIBS level (68%) were established, which proves the existence of iron metabolic disorders in chronic HCV patients. In its turn, revealed direct connection between levels of serum iron and ALT let us to assume the presence of pathogenetic link between process activity and severity of metabolic disorder as an additional liver-damaging factor.