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EPIDEMIOLOGIC EVALUATION FACTORS THAT INFLUENCE THE DEVELOPMENT OF COMBINED FORMS OF HIV WITH PARENTERAL VIRAL HEPATITIS AMONG THE POPULATION OF SAKHA REPUBLIC (YAKUTIA)

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UDC 616.36-002+616-097-022:578.828.6 (571.56)

This work based on analysis of case histories of individuals with mixed infections (HIV + parenteral hepatitis viruses) in comparison with mono HIV and parenteral hepatitis viruses, given the epidemiological evaluation of risk factors are potentially able to influence the formation of associated forms. Demonstrated the leading role of age, sex and intravenous drug use.

Key words: epidemiology, risk factors, HIV, hepatitis B and C.

Introduction. One of the features of the modern period, the spread of infections is increasing in the share structure of the infectious diseases combined (mixed forms) of various etiologies [12]. The cause of this phenomenon remains poorly understood. By according to Selivanov A.A. [7], Yakovlev A.A., Pozdeeva E.S. [15] the emergence of infections of mixed etiology should be treated with interspecies ecological point of view, not only as an accident caused the association. It is known that the mix - a form caused by viruses parenteral hepatitis, as well as their combinations with agents of other infections (tuberculosis, HIV, etc.) are characterized by greater potency hroniogennoy and often unfavorable course of infection [14].

The Sakha Republic (Yakutia) in its harsh climate, remoteness, poor infrastructure, active migration as a foreign labor, and citizens of the Russian Federation, is a disadvantaged region of the incidence of infections with a transmission mechanism gemokontaktnym (HIV, hepatitis B and C) [4]. For decades, the incidence of hepatitis B in the 3-3.5 times higher than the all russian figures [8]. In the period from 2005 to 2009 marked a permanent increase in the incidence of chronic hepatitis C achieve a maximum level of 51.9 per 100 thousand population [6]. In recent years, recorded increases in HIV prevalence among foreign nationals and 33%, and the inhabitants of various regions of Russia, who arrived with an established diagnosis, up to 38% of newly diagnosed in 1996 [9]. In connection with the common ways of infection might be expected, as in other areas [5, 11], and the combination of a high frequency of HIV with HCV-

infection and HBV and/or other hepatotropic viruses. However, the problem of combined forms of these infections in the Republic was not considered.

The purpose of this study was the evaluation of epidemiological factors, presumably contributing to the formation of HIV infection in combination with parenteral viral hepatitis.

Materials and methods. The starting material the history of the disease during the period from 2006 to 2010 persons admitted to the infectious diseases hospital PO "Yakutsk city hospital," hospital records of patients undergoing outpatient monitoring at the PA "Yakut Republican Center for Prevention and Control of AIDS." Taken together, analyzed some 600 medical records and outpatient charts. Necessary data on patients with combined forms of parenteral viral hepatitis with HIV (200 case histories and outpatients) were recorded in a specially designed case report. Epidemiological evaluation given to the most important factors used in the descriptive and evaluative studies [1] that may affect the way we thought and the formation of associated infections. Also take into account available information [10, 15] on the factors influencing the incidence of infections with a population of Far Eastern Federal District gemokontaktnym transfer mechanism and the results of our previously conducted epidemiological studies [4]. As a comparison group used data from 200 case histories of patients with HIV (without addition of viral hepatitis) and 200 - chronic mono infections with hepatitis B (CHBV) and hepatitis C (CHCV), because it is chronic forms of viral hepatitis in recent years, dominated in the Republic.

Statistical analysis of the material was carried out by conventional methods with the calculation of average values (M) and standard error of the mean values (m). In an epidemiological evaluation of risk factors in the development of mixed - infection rate was calculated odds ratios (OR) and confidence interval (CI) to it [2].

Results and discussion. As the results of investigations of cases (table 1), dominated by individuals with a diagnosis of HIV in combination with CHBV (85 ± 7,7%). Second place was taken by patients with mixed forms of HIV with CHBV and CHCV (6,5 ± 2,4%). The combination of HIV only with CHBV was observed in 5 ± 2,1% cases. HIV in combination with chronic hepatitis B, C and D (CHDV) was recorded at 2 ± 1,4%. In rare cases, met mixed form of HIV with chronic hepatitis G (GHGV) and C (1,5 ± 1,2%).

Table 1

Most HIV in combination with viral hepatitis was reported (73,5 ± 5,9%) in males (table 2). Presumably this is due to the fact that the infection primarily occurred in intravenous drug use, namely, males account for the risk among drug users [13]. In addition, as you know, males dominate considerably among patients with hepatitis C [3], and we are examining a sample of combined forms of CHCV met the 90% of cases. However, as shown in Table. 3, no significant

differences in being male patients with mixed - and mono forms of hepatitis have been identified by us. Most HIV in combination with viral hepatitis was registered in the age group 20-29 years (68.5 ± 5.1%, OR = 2.2, 95% CI 1.7-1.8). In second place people aged 30-39 years (14.5 ± 3.2%).

Table 2

The patients are related to the socio–dizadaptirovannoe non-working population (drunkers, addicts etc.) were more common among patients infected with HIV, and indiscriminate sex on the risk of essentially mixed - forms had no effect (table 2). Consequently, the risk of mix - mono infection or HIV in the disordered sexual relationship is almost identical. However, this risk is much less impact on the possibility of infection how or parenteral virus hepatitis (table 3).

Table 3

Evaluation of epidemiological history of patients with HIV in combination with viral hepatitis showed that more than half of the patients (52.5 ± 1.6%) were drug addicts who used psychotropic drugs intravenously. Moreover, as shown in table 3, among patients with mono hepatitis people who use drugs were found only in 2%. The duration of drug use in 45.2% of patients with mixed infection of less than one year and from year to two years or more - 54.8%.

Conducted numerous epidemiological studies have shown that co-infection is the result of either sequential infection (superinfection) or simultaneous (coinfection) [4]. Because the fact that intravenous drug use is less often observed with mono hepatitis patients (2.0%) were significantly more likely - only infected with HIV (27%) and almost more than half of patients with combined forms (52.5%), it is possible to think that this co-infection led to their development. In turn, this indicates a significant extent in modern times, reservoir for infections gemokontaktnym mechanism of transmission in the Sakha Republic (Yakutia) are those with mixed - forms of parenteral viral hepatitis and HIV who use drugs.

Conclusions:

1. The most common form of mixed forms of HIV infection with parenteral viral hepatitis is a combination of HIV with chronic hepatitis C (85 + 7.7%).
2. Contributing to the formation of mixed - infection factors on the classification of Belyakov V.D. [1], the age of cases ranged from 20 to 29 years and male gender. Factors contributing include injecting drugs. Less important are disordered sexual relations.

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Table 1

The most common mix - form of parenteral viral hepatitis and HIV and share some of their options in the general structure of associated infections

Options for a combination of viral hepatitis and HIV	Total of patients	% ± m
HIV+ CHCV	170	85 ± 7.7
HIV+CHBV+CHCV	13	6.5 ± 2.4
HIV+CHBV	10	5.0 ± 2.1
HIV+CHBV+CHCV+CHDV	4	2.0 ± 1.4
HIV+CHCV+CHGV	3	1.5 ± 1.2
Total	200	100

Table 2

The distribution of risk factors among patients with HIV in combination with viral hepatitis and HIV without

Risk factors	The proportion of patients with HIV	Percentage of patients with	The odds ratio (OR)	The confidence

	in combination with viral hepatitis who have a risk factor (% ± m)	HIV who have a risk factor (% ± m)		interval (CI)
Male	73.5 ± 5.9	61 ± 4.9	1.8	1.7-1.9
Age of cases 20-29 years	68.5 ± 5.1	50 ± 5.0	2.2	2.1-2.3
Drug use	52.5 ± 1.6	27 ± 4.4	3.0	2.9-3.1
Having sexual contact	48.5 ± 1.7	66 ± 6.4	0.5	0.4-0.6
socio–dizadaptirovannoe non-working population	24 ± 3.5	42 ± 4.9	0.4	0.3-0.5

Table 3

The distribution of risk factors among patients with HIV in combination with viral hepatitis and mono hepatitis

Risk factors	The proportion of patients with HIV in combination with viral hepatitis who have a risk factor (% ± m)	Percentage of patients with mono hepatitis with a risk factor (% ± m)	The odds ratio (OR)	The confidence interval (CI)
Male	73.5 ± 5.9	68 ± 4.9	1.3	1.2-1.4
Age of cases 29-29 years	68.5 ± 5.1	50.5 ± 0.7	2.1	2.0-2.2
Drug use	52.5 ± 1.6	2.0 ± 1.4	54.2	54.1-54.3
Having sexual contact	48.5 ± 1.7	14 ± 4.5	5.8	5.7-5.9
socio–dizadaptirovannoe non-working population	24 ± 3.5	23.5 ± 3.5	1.1	1.0-1.2