

Features of HIV and HCV epidemics in central part of Ukraine

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Background. Two severe epidemics observe in Ukraine – HIV-infection and hepatitis C. HIV-infected persons demonstrated high prevalence of HCV - up to 44-60%. We estimated the morbidity of HIV-infection and chronic hepatitis C in Poltava region in 2003-2019 and the predictors of HCV-infection in HIV-infected patients.

Methods: Routine clinical data 1537 HIV-infected patients aged 18-65 years admitted to Poltava HIV/AIDS clinic in 2003-2019 were analyzed as a retrospective cohort. Multinomial logistic regression models were used to identify the predictors of HCV-infection among HIV-infected patients in region.

Results: According to Alliance for Public Health, hepatitis C testing was organized in August 2019 in 21 cities in mobile ambulatories. Aproximately 3000 people were tested among residents not from vulnerable groups, in 203 cases (7%) a positive result was found.

In the regions of Ukraine, the level of positive tests ranged from 2 to 12%, in the Poltava region 9% respectively (Fig.1).

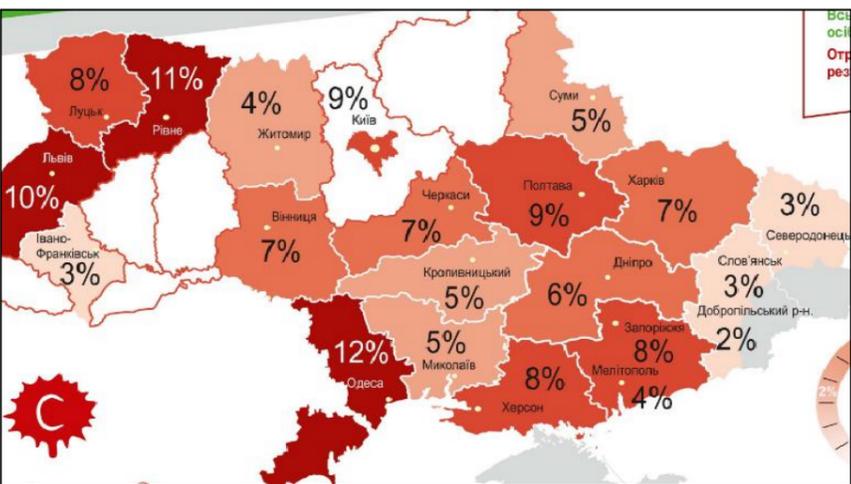


Fig.1 Results of national testing for HCV (n=2907, 203 (7%) – ab HCV+), Alliance for Public Health, 2019

The prevalence of HIV/HCV-coinfection in the cohort of the first diagnosed cases of HIV infection in Poltava region during the period of 2003-2019 was recorded at the level of 56.1% to 65.9% and was characterized by the predominance of male (63.4%), age group of 30-49 years (69.3%), with IV drug using (77.2%). Among these patients, there were 848 HIV / HCV coinfecting people. In the co-infected group the number of men (63.4%) was significantly more prevalent

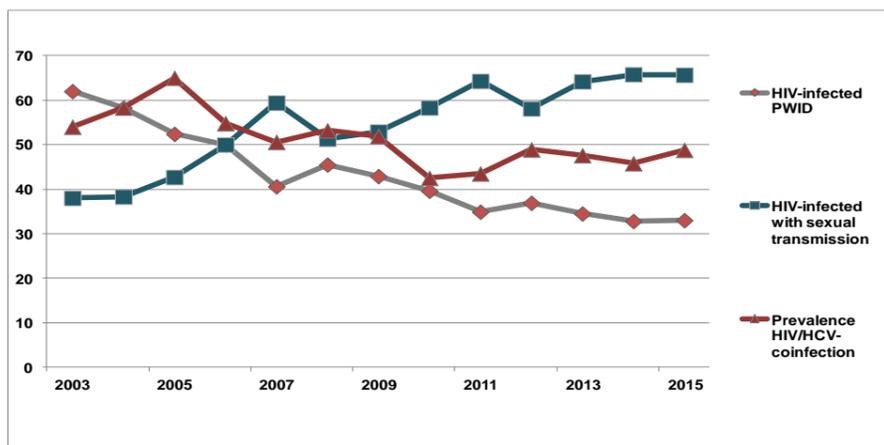


Fig.2 Dynamics of prevalence HIV/HCV coinfections and routes of HIV thranmission

Despite the changing of HIV-infection route of transmission to sexual from 2008, the prevalence of HCV-coinfection was recorded at the 55.4% to 61,7% (Fig.2). The rates of the prevalence of HIV-infection and chronic hepatitis C revealed the highest in cities and districts, located around the regional and federal highways with places concentration of sexual workers (Fig.3).

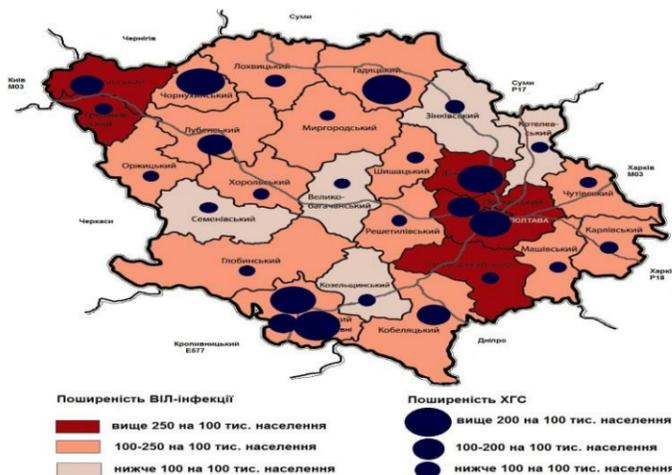


Fig.3 Prevalence of HIV-infection and Hepatitis C in Poltava region 1.01.2019

HCV-infection in HIV-infected patients after 2008 were associated with male sex (OR=1,20, p=0,045), age≥40 years (OR=1,11, p=0,038,), experience of incarceration (OR=2,13, p=0,013) and using of drugs (OR=3,242, p=0,022) (Table 1).

Table 1 Characteristics of HIV and HIV/HCV-cohorts

	HIV/HCV-coinfecting (n=848)	HIV-infected (n=689)	p
Men, abs (%)	538 (63,4)	198 (28,7)	0,000
Age, years (IQR)	33,0 (29,0-37,0)	30,0 (24,0-35,0)	0,000
Duration of HIV-infection, M±m, years	2,07±0,13	0,38±0,05	0,000
Injecting drug use abs (%)	655 (77,2)	29 (4,2)	0,000
Experience of incarceration abs (%)	139 (16,5)	14(2,0)	0,000

Conclusions: This study suggests association between the male sex, age≥40 years, experience of incarceration. using of drugs and presence of HCV-infections in HIV-infected patients.