

Hepatitis C virus infection in HIV-1 positive individuals from Slovenia

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SUMMARY

The incidence of infection by hepatitis C virus (HCV) is increased among HIV infected individuals, reflecting shared epidemiological risks. The aim of our study was to determine the prevalence of HCV infection among 136 HIV-1-positive individuals from Slovenia. The overall prevalence of HCV infection in HIV-positive individuals was 16.9%, which is among the lowest prevalence found in similar studies from other European countries. The prevalence of HIV and HCV co-infection was the highest in hemophiliacs and intravenous drug users. A significant difference in HCV infection prevalence between blood and sexual exposure risk groups was found (76% vs. 1.9% respectively, $p < 0.01$).

Introduction

K E Y W O R D S

**HIV, HCV, co-
infection,
Slovenia,
AIDS**

The co-infection by hepatitis C virus (HCV) and human immunodeficiency virus (HIV) is quite common, mainly due to some shared transmission routes. Previous studies placed the prevalence of HCV infection among HIV-positive individuals between 3-98% with the large variation primarily attributable to the population studied (1). Thus, the prevalence of HCV infection in those who acquired HIV infection by sexual transmission varies from 4-18%, and rises to nearly 100% in some hemophiliacs series (1, 2). The objective of our study was to determine the prevalence of HCV infection among HIV-1-positive individuals from Slovenia.

Materials and methods

136 HIV-1-positive individuals (102 men, 34 women) from Slovenia were included in the study. They represented 80.9% of 168 HIV infected individuals who have been detected in Slovenia up to December 31, 2000 (91 AIDS cases, 77 anti-HIV positive individuals). They were distributed according to risk factors for HIV infection as follows: 69 (50.7%) homosexuality/bisexuality, 32 (23.5%) heterosexual high-risk behavior, 13 (9.6%) hemophilia, 11 (8.1%) intravenous drug use, 5 (3.7%) unknown, 4 (2.9%) vertical transmission, 1 (0.7%) human bite by an AIDS patient and 1 (0.7%) a combination of homosexuality and intravenous drug use.

In all patients included in the study, anti-HCV status was determined using the Ortho HCV 3.0 ELISA Test System (Ortho Diagnostic Systems, Neckargemünd, Germany). Reactive sera were supplementary tested by Inno-Lia HCV III Update Test (Innogenetics, Ghent, Belgium). The presence of HCV RNA was determined using second-generation Roche COBAS Amplicor HCV assay (Roche Molecular Systems, Nutley, USA).

Results

23 (16 men, 7 women) out of 136 HIV-positive individuals (16.9%) were anti-HCV positive. 18 anti-HCV positive patients (78.3%) were also viremic. HCV RNA was not detected in any of HCV-seronegative/HIV-infected individual from Slovenia.

Antibodies to HCV were detected in 92.3% (12/13) hemophiliacs, 63.6% (7/11) intravenous drug users (IVDUs), 6.25% (2/32) of those who acquired HIV infection by heterosexual high-risk behavior, in one woman with unknown risk factor for HIV infection and in a homosexual IVDU.

Discussion

The overall prevalence of HCV infection in HIV-positive individuals from Slovenia was 16.9%, which is among the lowest prevalence found in similar studies from other countries (2-7). The low overall prevalence of HCV and HIV co-infection in our country can be explained by the fact that almost 75% of all subjects included in the study acquired HIV infection by sexual transmission. The risk of HCV transmission is namely

far smaller for patients who acquire HIV infection through the sexual route than for those who acquire it through the parenteral route (1, 2, 6, 7). This was also clearly established in our study, where a significant difference in HCV infection prevalence between blood and sexual exposure risk groups was found (76% vs. 1.9% respectively, $p < 0.01$). The prevalence of HCV infection in our group of HIV-positive individuals was the highest in hemophiliacs and IVDU. All but one Slovenian HIV infected hemophiliacs (92.3%) were also HCV infected, which is similar to the percentage reported from other countries (2-7). In contrast only 63.7% of our HIV-1-positive IVDUs were HCV infected. When comparing these results with those obtained in other countries, where 58-92% HIV-positive IVDUs are HCV infected (2-7), it is obvious that the prevalence of HCV infection in Slovenian HIV-positive IVDUs is among the lowest found to date. This low prevalence of HCV infection among Slovenian HIV-positive IVDUs is not surprising, since the prevalence of all parenterally transmissible viruses (HIV, HTLV, HBV, HCV and HGV) is lower or among the lowest in comparison with IVDUs from other European countries (8, 9).

Conclusions

The overall prevalence of HCV infection in HIV-positive individuals from Slovenia was 16.9%, which is among the lowest prevalence found in similar studies from other European countries. The prevalence of HIV and HCV co-infection was the highest in hemophiliacs and IVDU. A significant difference in HCV infection prevalence between blood and sexual exposure risk groups was found (76% vs. 1.9% respectively, $p < 0.01$).

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**A U T H O R S '
A D D R E S S E S**

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