

Hepatitis C Virus and Sexual Transmission

Sir,

Assays for the detection of hepatitis C virus (HCV) antibodies have been available since 1989, at which time it was shown that HCV is the major cause of non-A and non-B hepatitis (1). It seems likely that HCV, when highly transmissible with transfusion, might also be transmitted by sexual contact as is the case for hepatitis B virus (HBV). Some studies have shown that sexual transmission of HCV is of importance (2-4); other studies have, however, concluded that the risk of sexual transmission is very low (5-7).

Previously we found a high prevalence of anti-HCV in injecting drug-users, but a low prevalence in homosexual men (8). In order to further elucidate the risk of sexual transmission of HCV, we examined the prevalence of anti-HCV among a heterosexual non-drug using venereological clientele, previously examined for HBV markers.

MATERIALS AND METHODS

The sera of 465 heterosexual non-injecting patients from the outpatient Venereal Disease Clinic of Copenhagen were examined. The material comprised 278 male and 187 female patients, with a mean age of 28 years (range 16-68 years). The patients were enrolled in a prospective serological study of HBV markers in 1991, at which time demographic data and data about risk behaviour such as sex, age, country of birth, a history of hepatitis or transfusion, partner with a history of hepatitis or drug use, number of sexual partners last 6 months and lifetime, history of STD and, if known, previous HIV test result were also collected (9).

All sera were tested for anti-HCV with two different second-generation EIA tests (Abbott Diagnostic Division and Ortho Diagnostics). Repeatedly reactive specimens in both EIA tests were retested with a second-generation recombinant immunoblot assay (RIBA) (Chiron, Emeryville, USA). The sera were considered anti-HCV positive if repeatedly reactive for anti-HCV on both EIA tests and positive for anti-HCV by RIBA.

RESULTS

Out of the 465 sera, anti-HCV was detected in 7 sera (1.5%) by EIA, of which 4 (0.9%) were indeterminate and 3 (0.6%) were confirmed positive by HCV-RIBA. One of these sera came from a 32-year-old man with a history of transfusion. The remaining 2 anti-HCV positive sera (0.4%) came from one man and one woman, both born in Denmark, aged 28

and 20 years, respectively. The male patient had serological markers indicating previous HBV infection but no HIV antibodies whereas the female patient had HIV antibodies but no HBV markers. The number of sexual partners were one during the last 6 months and 50 (for the male) and 20 (for the female) during lifetime. The female patient had had a drug-using partner but never injected drugs herself.

Both patients had had genital warts and the female patient had a history of chlamydial infection besides being HIV-infected.

DISCUSSION

The Nordic countries are HCV low prevalence areas, with 0.05-0.30% of new blood donors being found seropositive (10). The most important risk groups are injecting drug-users, in whom prevalences of 98, 58, 70 and 80% have been found in Denmark, Finland, Norway and Sweden, respectively (8, 11-13). Thus there is a reservoir among injecting drug-users that might be of importance if HCV was spread by sexual contact.

In this study, however, only 2 out of 465 (0.4%) heterosexual STD clinic attenders were found anti-HCV positive without having any known risk factors for parenteral transmission. The same group of patients had an overall prevalence of HBV markers of 15%, being highly dependent on the country of birth, associated with a history of gonorrhoea, but not with the number of sexual partners (9). The 2 patients with HCV antibodies were born in Denmark, had had a relatively high number of lifetime sexual partners and previous STD episodes, one had HBV markers and one was HIV-infected, all indicators of a behaviour increasing the risk of having infectious agents transferred by sexual contact.

An association between the presence of HCV, HBV and HIV has been found (14, 15), though not in all studies (7).

In conclusion, this study suggests that sexual transmission of HCV may occur but that the risk is very low. Therefore, routine screening of STD clinic attenders for HCV antibodies cannot be recommended.

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