

HCV TRANSMISSION IN HEALTH CARE SETTING

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ABSTRACT

An exposure that might place CHW at risk for HCV infection is defined as a percutaneous injury (e.g. a needle stick or cut with a sharp or contact with mucus membrane or non-intact skin or other body fluids that are potentially infectious) Feces, nasal secretions, saliva, sputum, sweat, tears, urine, vomitus, are not considered potentially infectious unless they contain blood. Avoiding occupational blood exposures is the primary way to prevent transmission of HCV in health care settings. HCV is not transmitted efficiently through occupational exposures to blood. The average incidence of anti HCV seroconversion after accidental percutaneous exposure from an HCV positive source is 1.8% (Range 0% -7%) Transmission occurred only from hollow –bore needle, compared with other sharps. Data are limited on survival of HCV in the environment. In contrast to the HBV the epidemiologic data for HCV suggest that environmental contamination with blood containing HCV is not a significant risk for transmission in the health care settings with the possible exception of the hemodialysis setting where HCV transmission related to environmental contamination and poor injection control practices have been implicated. The risk for transmission from exposure to fluids or tissues other than HCV infected blood also has not been quantified but is expected to be low. Data upon which to base a recommendation for therapy of acute infection are insufficient because no data exist regarding the effect of treating patients with acute infection who have no evidence of infection.

INTRODUCTION

HCV is a single stranded RNA flavivirus. Six major HCV subtypes exist with varying amino-acid sequences (genotypes), these subtypes vary geographically and in virulence and response to therapy.

HCV can also alter its amino-acid pattern over time in an infected person.

Tattoos body piercing. Sexual transmission vertical transmission from mother to infant are relatively rare. Transmission through blood transfusion has become very rare since the advent screening tests for donated blood. Some in patients without apparent risk factors.

HCV prevalence varies with geography and other risk factors. HCV infection sometimes occur simultaneously with specific systemic disorders including mixed cryoglobulinemia, porphyria and glomerulonephritis, the mechanisms are uncertain.

In addition, up to 20% of patients with alcoholic liver disease harbor HCV. The reason for this high association are unclear because concomitant and drug use accounts for only a portion of cases. In these patients HCV and alcohol act synergistically to exacerbate liver damage.

MATERIALS AND METHODS

The number of 182 reported cases of physicians, nurses and laboratory technicians working in 6 Regional hospitals in the Republic of Guyana South America were exposed to percutaneous injuries at work during the period from 1st January 2011 to 31st December 2012. Consent was obtained for both the exposure source and the exposed in accordance with applicable laws in the Republic of Guyana. For the source persons testing for anti-HCV testing was performed. Repeatedly reactive results by ELA were considered. 20 exposure source persons could not be tested. The exposure persons were evaluated for the potential transmission of HCV based on the type of

substance involved and the route and severity of the exposure. Blood was the main type of exposure through percutaneous injuries and other penetrating sharps were related to all events. For the exposed persons to an HCV- activity was performed. All exposure persons were followed up at 4-6 months, for anti HCV and ALT activity. All anti-HCV results reported positive were confirmed by enzyme immunoassay using supplemental anti HCV testing. (RIBA).

RESULTS

A hundred eighty-two HPW were exposed to percutaneous and penetrating sharps. The average risk of transmission of Hepatitis C virus after needle stick was 1.8%. Liver enzymes (ie ALT) were abnormal in all exposure source persons. 50% of the exposed persons had drug use

Or sexual contact with a known positive partner.

DISCUSSION

HCV transmission related to environmental contamination and poor injection control practices have been implicated. The risk for transmission from exposure to fluids or tissues other than HCV infected blood also has not been quantified but is expected to be low.

Data upon which to base a recommendation for therapy of acute infection are insufficient because no data exist regarding the effect of treating patients with acute infection who have no evidence of disease. The appropriate regimen is unknown.

CONCLUSION

procedures should be established for testing CHW for HCV after percutaneous or mucosal exposures to blood and ensure that all personnel are familiar with these policies and procedures.

To confirm all anti-HCV results reported positive by enzyme Policies and Immunoassay.

Health care professionals who provide care to persons exposed to HCV in the occupational setting should be knowledgeable regarding the risk for HCV infection.

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