remain aware of the limitations of these capture-recapture methods for estimating the prevalence of disease, carefully choose the situations in which to apply them, and interpret the results cautiously.

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Risk of HCV After Occupational Exposure

by Gina Pugliese, RN, MS
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Dr. Vincent Puro of the Spallanzani Hospital in Rome and colleagues from the Italian "Study Group on Occupational Risk of HIV and Other Bloodborne Infections" recently reported a 1.2% risk of hepatitis C virus (HCV) infection among healthcare workers (HCWs) following a hollow-bore needlestick to a patient with proven HCV infection. The prospective study followed 646 HCWs that sustained a percutaneous, mucous membrane, or nonintact skin exposure to blood or body fluids from a source patient known to be seropositive for HCV antibody. HCV seroconversion within 6 months of reported exposures were assessed by second-generation enzyme immunoassay and immunoblot assay.

From January 1992 through December 1993, 331 (51%) hollow-bore needlesticks, 105 (16.5%) suture needle or sharp object injuries, 85 (13%) mucous membrane contamination, and 125 (19.5%) skin contaminations were reported. Four HCW seroconversions (1.2%) were observed after hollow-bore needlesticks.

The authors note that the absence of seroconversions in the group that sustained injuries with solid sharp objects or contamination of nonintact skin or mucous membrane could be because of the small sample size, as well as lower transmission efficacy by these routes.

Hollow-bore needles do, however, appear to carry a higher risk than other solid devices, probably because of the larger amount of infected material they transfer.

Studies of HCV transmission following occupational exposures have reported a risk of 0% to 10%—with all reported cases occurring following a needlestick injury. The wide variations in reported rates may be related to differences in study designs, diagnostic methods used, sample size, and by different degrees of infectivity of various HCV strains.

FROM: Puro V, Petrosillo N, Ippolito G. Risk of hepatitis C seroconversion after occupational exposure in healthcare workers. *Am J Infect Control* 1995;23:273-277.