

Hepatitis C

HCV Screening in Prisons

Hepatitis C is widespread in correctional facilities, and experts estimate that perhaps 1.3 million HCV positive individuals are released from U.S. prisons each year. Current recommendations from the Centers for Disease Control and Prevention (issued in 2003) call for HCV screening of inmates with a history of injection drug use or other risk factors. But according to a study published in the October 2005 *American Journal of Public Health*, this policy may miss a large proportion of infected individuals. Grace Macalino and colleagues analyzed data from a representative sample of 4,263 inmates who received mandatory blood tests when they entered Rhode Island Department of Corrections facilities between 1998 and 2000. Among male inmates (15,000 of whom enter the

system each year), 23.1% were HCV positive; the rate for women (2,500 of whom enter the system annually), the rate was 40.5%. The researchers found that 65.5% of the HCV positive men and 44.2% of the women did not report injection drug use to a prison nurse during intake interviews. Past studies have shown that self-reported drug use does not correlate well with the results of urine toxicology tests. Under the current CDC policy, a majority of the HCV infected individuals in Rhode Island prisons would not have been tested based on self-reported risk factors. The authors concluded that, "risk-based screening alone is not sufficient to accurately confront the magnitude of HCV infection in prisons." While acknowledging concerns about mandatory testing, the authors argued that if more patients with hepatitis C are

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detected early, before they develop symptoms, they can be educated about self-care (such as abstaining from alcohol) and prevention of HCV transmission to others, and can be monitored and treated if liver disease progresses. As an alternative to mandatory testing, voluntary screening could be offered to all inmates, not just those who report risk factors.

Hepatitis C in Latinos

Ramsey Cheung and colleagues conducted a cross-sectional survey of 421 Latinos and 2,510 Caucasians with chronic hepatitis C at 24 Veterans Affairs Medical Centers; results were reported in the October 2005 *American Journal of Gastroenterology*. The researchers found that, compared with Caucasians, Latinos were infected at younger ages and were about seven times more likely to be coinfecting with HIV (20.4% vs 3.9%). Fibrosis progression was similar in both groups, but Latinos were more likely to have steatosis (fatty liver). Latinos more often met the criteria for hepatitis C treatment, but were less likely to actually start therapy, and those who did were more likely to discontinue treatment before completion (39.8% vs 28.9%). Among the 88 Lati-

nos and 481 Caucasians treated with interferon plus ribavirin, the Latino group tended to have a lower sustained virological response (SVR) rate than Caucasians (14.8% vs 22.5%), but in a multivariate analysis that controlled for other factors, race/ethnicity was not a significant predictor of treatment response. Unlike African Americans, Latinos do not appear to have biological factors that predispose them to poorer response to interferon-based therapy.

Tattoos a Potential HCV Risk

Also reported in the same issue of *American Journal of Gastroenterology* was a study by W.L. Hand and Y. Vasquez of risk factors for hepatitis C in El Paso, on the Texas-Mexico border. Over a two-year period, the researchers interviewed 320 HCV positive patients and 307 HCV negative controls. As expected, in a multivariate analysis, injection drug use and blood transfusion were predictors of HCV infection. Tattooing was also found to be a significant independent risk factor for HCV. In this cohort, most patients with tattoos had them applied by friends, fellow jail or prison inmates, or by themselves, rather than in commercial tattoo parlors.

The authors concluded that, “The role of nonsterile tattooing practices in HCV transmission merits additional examination in regard to precise risk settings, frequency, and mechanisms of infection.”

Sexual Transmission of HCV

Two recent journal articles shed additional light on the controversy over sexual transmission of HCV. While some studies show that sexual transmission is negligible, others suggest it occurs more often than recognized, especially among gay and bisexual men, and men and women coinfecting with HIV. In the November 1, 2005, *Journal of Infectious Diseases*, M.J. Nowicki and colleagues reported on the presence of HCV in the genital fluid of HIV/HCV coinfecting women. The researchers measured HCV RNA in the cervicovaginal lavage (CVL) fluid from 58 coinfecting women and 13 women with HCV alone enrolled in the Women’s Interagency HIV Study. HCV genetic material was detected in the genital fluid of 29% of the coinfecting women, but none of the HIV negative women with HCV alone (plasma HCV RNA was detected in 67% and 46%, respectively). Women were more likely to

have detectable CVL HCV if they had detectable plasma HCV and/or detectable CVL HIV. However, CVL HCV was not significantly associated with plasma HIV viral load, type of anti-HIV therapy, or number of CD4, CD8, or CD3 T-cells. In a subset of three coinfecting women who underwent further testing, HCV quasiespecies (variants) were detected in CVL fluid that were not present in blood plasma or peripheral blood mononuclear cells (PBMCs), suggesting that the genital tract may act as a “reservoir” or “sanctuary” site for HCV. “Our observations point to the importance of the genital tract compartment, in which local HCV replication could be facilitated by local HIV-1 replication,” the researchers concluded. The presence of HCV in the genital fluid of coinfecting women has implications both for sexual transmission as well as transmission from mother to baby.

In a complementary study published the same week in the November 4, 2005, issue of *AIDS*, Aureliea Briat and colleagues from Paris looked at HCV in the semen of HIV/HCV coinfecting men. The researchers analyzed data from 82 coinfecting men and 38 men with HCV alone in two prospective studies; all had detectable plasma HCV

viral load. HCV RNA was measured in seminal fluid, spermatozoa, and non-sperm cells in the semen. HCV was found more often in the semen of coinfecting men compared to men with HCV alone (37.8% vs 18.4%). Among the men who had repeated semen sampling, HCV was detected intermittently, but nearly 43% of the coinfecting men had at least one sample with detectable HCV RNA. HCV was not detected in sperm cells themselves. Men with detectable semen HCV had significantly higher plasma HCV, although some with low plasma HCV viral load had detectable semen HCV, and some with high plasma HCV viral load had undetectable semen HCV. Semen HCV was not associated with plasma HIV viral load or CD4 cell count. In contrast to the female genital tract study reported above, the researchers did not see evidence of local HCV replication in the male genital tract; rather, HCV appeared to pass into semen from the blood (perhaps with certain quasiespecies transferring more easily). Based on these results, they recommended that HIV/HCV coinfecting individuals should practice safer sex with barrier protection.



HCSP GUIDES

The Hepatitis C Support Project has published various publications in our “Guide” series. The Guides are available on our Web site

A Guide to Understanding HCV – this Guide provides a simple but comprehensive overview of hepatitis C including transmission/prevention, disease progression, symptoms, diagnostic tools, disease management and information about HCV treatments. (Available in English and Spanish.)

Management of Hepatitis C by the Primary Care Provider: Monitoring Guidelines. This Guide provides the medical provider with the necessary information to help identify and manage hepatitis C positive individuals. (Available in English and Spanish.)

A Guide to Hepatitis and Disability is one of the most comprehensive documents available on how to prepare and file for social security disability. There is additional information on commercial disability insurance, and health insurance.

A Guide to Hepatitis C Treatment Side Effect Management provides information on treatment related side effects and simple tips on how to manage the sides of HCV therapy.

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