Passive HIV Antibody Reactivity Following Percutaneous HCW Injury

At the fifth Conference on Retroviruses and Opportunistic Infections, investigators reported the first well-documented case of passive HIV antibody detection after a healthcare worker (HCW) exposure. A baseline blood sample, obtained from a nurse 40 minutes after a hand laceration on a glass tube containing blood from an AIDS patient, was reactive on a third-generation anti-HIV 1/2 DNA-antigen enzyme immunoassay (EI; Abbott 3A77) with gp 120/160 bands on Western blot (WB). One week postexposure, the nurse tested negative by WB but positive by polymerase chain reaction, followed by complete EIA and WB seroconversion over the next month.

The epidemiological linkage of HIV-1 strains in the nurse and the patient, and the level of inoculum required for passive anti-HIV reactivity, was investigated, and two centers independently analyzed the viruses. The viral sequences from the nurse and the patient were found to be highly related, differing by less than 2%. No sequences with less than 10% homology to the nurse or patient was found among the more than 34,000 HIV sequences in the database.

The researchers concluded that this was the first well-documented case of passive HIV-antibody detection after a HCW exposure. The data suggest that a reactive baseline EIA/WB, particularly after a large-volume blood exposure, should not be assumed to represent prior infection or to exclude postexposure prophylaxis but should be confirmed by follow-up testing.

FROM: de Oliveira CF, Harmache A, Frenkel LM, Gupta P, Mullins J, Busch MP. Passive HIV antibody reactivity following a health care worker accident: implications for post-exposure management. Presented at the Fifth Conference on Retroviruses and Opportunistic Infections; February 1-5, 1998; Chicago, IL. Abstract 135.

HIV Testing for All Patients With TB

Dr. Sharon Welbel and colleagues from Cook County Hospital in Chicago recently reported the results of a study of HIV prevalence among patients being screened for TB. At Cook County Hospital, 1,776 (3%) of 27,808 patients in 1996 were HIV-infected. There were 534 newly diagnosed cases of HIV and 170 newly diagnosed cases of TB in the same period. Since January 1, 1997, every patient screened for the presence of pulmonary TB was offered HIV testing. From January 1, 1997, to July 31, 1997, 371 patients of unknown HIV status were housed in respiratory isolation rooms outside of the inpatient HIV unit, and 205 (55.2%) were HIV tested. Thirty-five (17.1%) of the 205 were HIV-infected. This was significantly higher than the HIV seroprevalence rate in patients not in respiratory isolation during the same time period (420 [10.6%] of 3,672; $P<.005$). There were no significant differences in mean age, gender, or ethnicity between HIV-infected and -noninfected groups. Of the study group, 38 were diagnosed with TB; only 4 (10.5%) of 38 were HIV-positive.

The authors concluded that the HIV seroprevalence rate was significantly higher (for patients admitted to respiratory isolation rooms) than for nonisolated patients. If only patients with known TB were HIV tested, identification of HIV status would have been missed in 31 (89%) of 35 patients found to be HIV positive. The authors conclude that it may be valuable to HIV test all patients who are being evaluated for TB in hospitals where the prevalence of HIV and TB are high.

FROM: Welbel S, de Guzman D, Denbsten K, Wester W, Ajudia K, Braswell K. HIV seroprevalence in patients being evaluated for tuberculosis. Presented at the fifth Conference on Retroviruses and Opportunistic Infections; February 1-5, 1998; Chicago, IL. Abstract 138.

Acute Renal Failure Linked to Intrinsically Contaminated Drug

Researchers recently reported the results of an investigation of deaths among children in Haiti from acute renal failure related to the use of a locally prepared acetaminophen preparation.

One hundred nine cases of acute renal failure among children were found. Of 87 patients with follow-up information who remained in Haiti for treatment, 85 (98%) died; 3 (27%) of 11 patients transported to the United States for intensive-care–unit management died before hospital discharge. A locally manufactured acetaminophen syrup was highly associated with disease (odds ratio, 52.7; 95% confidence interval, 15.2-197.2). Diethylene glycol (DEG) was found in patients' bottles in a median concentration of 14.4%. Glycerin, a raw material imported to Haiti and used in the acetaminophen formulation, was contaminated with 24% DEG.

FROM: O'Brien KL, Selanikio JD, Hecdivert J, Placide M, Louis M, Barr DB, et al. Epidemic of pediatric deaths from acute renal failure caused by diethylene glycol poisoning. *JAMA* 1998;279:1175-1180.

Liver Failure and Death After Exposure to Microcystins at Hemodialysis Center

From February 17-20, 1996, 116 of 130 patients (89%) at a dialysis center (dialysis center A) in Caruaru, Brazil, had visual disturbances, nausea, and vomiting associated with hemodialysis. By March 24, 26 of the patients had died of acute liver failure. A cohort study was conducted of the 130 patients at dialysis center A and the 47 patients at Caruaru's other dialysis center (dialysis center B). Acute liver failure occurred in 101 patients (all at dialysis center A), and 50 died. Affected patients who died were older than those who survived (median age, 47 vs 35 years; $P<.001$). Furthermore, all 17 patients undergoing dialysis on the Tuesday-,Thursday-, and Saturday-night schedule became ill, and 13 of them (76%) died. Both centers received water from a nearby reservoir. However, the water supplied to dialysis center B was treated, filtered, and chlorinated, whereas the water supplied to dialysis center A was not. Microcystins produced by cyanobacteria were detected in water from the reservoir, from dialysis center A, and in serum and liver tissue of case-patients. It was concluded that water used for hemodialysis can contain toxic materials, especially if the source is from surface waters, and its quality therefore should be monitored carefully.

FROM: Jochimsen EM, Carmichael WW, An JS, Cardo DM, Cookson ST, Holmes CE, et al. Liver failure and death after exposure to microcystins at a hemodialysis center in Brazil. *N Engl J Med* 1998;26:(338):873-878.

Risk Factors and Outcome of Nosocomial Infections in ICU Patients

Intensive-care–unit (ICU) patients are at increased risk of nosocomial infections. Investigators from Service de Reanimation Medicale and Departement de Medecine Interne, Hopital Broussais, Paris, France, conducted a study to define precisely the interrelationships between underlying disease, severity of illness, therapeutic activity, and nosocomial infections in ICU patients. In a 10-bed medical ICU, they conducted a case-control study with matching for initial severity of illness, with daily monitoring of severity of illness and therapeutic activity scores, and with analysis of the contribution of nosocomial infections to patients' outcomes. Forty-one patients who developed nosocomial infections during a 1-year period were paired with 41 controls without nosocomial infection according to three criteria: age (+/− 5 year), Acute Physiology and

https://doi.org/10.1017/S0195941700087877 Published online by Cambridge University Press