

TOXIC INFECTIVE DISORDERS

MERCURY POISONING AND LATEX PAINT

Mercury poisoning manifested as acrodynia, reported in a four year old boy in Michigan ten day after the inside of his home was painted with 64 liters of interior latex paint containing phenylmercuric acetate, prompted an investigation by the Division of Environmental Hazards and Health Effects, Centers for Disease Control, Atlanta, GA. Nineteen families were recruited from a list of more than 100 persons who called the Michigan Department of Public Health after a press release announced that some interior latex paint contained more than the recommended limit of mercury of 1.5 mmol per liter. The median mercury content of the paint in 29 cans sampled from the exposed households was 3.8 mmol per liter. The concentrations of mercury in the air samples obtained from homes of exposed families were significantly higher than in the unexposed households. Urinary mercury concentrations were significantly higher among the exposed persons than among unexposed persons (4.7 mmol of mercury per millimole of creatinine compared to 1.1 mmol per millimole). These mercury concentrations in exposed persons have been associated with symptomatic mercury poisoning. (Agocs MM, Etzel RA et al. Mercury exposure from interior latex paint. N Engl J Med Oct 18, 1990; 323:1096-1101).

COMMENT. Exposed children had the highest urinary mercury concentrations and young children may be at increased risk since vapors containing mercury are heavier than indoor air and tend to settle toward the floor. Individual exposure to mercury varies with the time spent in painted rooms, the depth and frequency of inhalation, the degree of ventilation in the room, and the likely decrease in mercury vapors over time. Opening all windows and doors decreased the concentration of mercury but it returned to the unventilated value within three hours of closing doors and windows. Mercury is released from surfaces coated with a paint containing mercury after the paint has dried. In the body phenylmercuric acetate is broken down to form inorganic mercury which accumulates in the kidney, the brain, and the fetus, and is excreted in the urine. A urinary mercury concentration of less than 100 mmol per liter is considered acceptable for adults but a background urinary mercury concentration for children has not been established. In the four year old boy who developed acrodynia, a 24 hour urine sample contained 324 mmol of mercury per liter. The clinical manifestations of acrodynia in this child included leg cramps, a generalized rash, pruritus, sweating, tachycardiac, an intermittent low-grade fever, marked personality change, erythema and desquamation of the hands, feet, and nose, weakness of the pelvic and pectoral girdles, and lower extremity nerve dysfunction developing sequentially. On June 29, 1990 the Environmental Protection Agency announced that compounds containing mercury could no longer be lawfully added to interior latex paint after August 20, 1990. If paint containing mercury

is employed then proper ventilation must be insured. The history of mercury poisoning and its manifestation as acrodynia in children is reviewed in an editorial (Clarkson TW. Mercury - An element of mystery. N Engl J Med Oct 18, 1990; 323:1137-39). Dimercaptosuccinic acid given orally is the most promising therapy.

CONGENITAL SYPHILIS

Seven infants with congenital syphilis who became symptomatic between 3 and 14 weeks of age are reported from the Bronx Municipal Hospital Center and Albert Einstein College of Medicine, Bronx, NY. At delivery four infants and their mothers had negative rapid-plasma-reagin tests for syphilis. The other three mothers had been seronegative and were not tested at delivery; two of their infants were seronegative at birth and one was not tested. When the infants became symptomatic all seven and the five mothers available for testing were seropositive for syphilis. A characteristic diffuse rash was the presenting symptom in four and three presented with fever and aseptic meningitis. All infants had multisystem disease evidenced by hepatosplenomegaly, increased aminotransferase and alkaline phosphatase levels, anemia, and monocytosis. All responded to parenteral penicillin. Radiological evidence of bone involvement was seen in three of six patients tested. Renal disease occurred in the youngest child, a three week old boy who had severe nephrosis. A Jarisch-Herxheimer reaction, consisting of a sudden elevation of temperature, occurred in all children within two to six hours after they received the first dose of antibiotics. (Corfman DH, Glaser JH. Congenital syphilis presenting in infants after the newborn period. N Engl J Med Nov 8, 1990; 323:1299-1302).

COMMENT. At least in areas where the disease is prevalent, serologic tests for syphilis should be included in the evaluation of all febrile infants and especially if associated with aseptic meningitis, hepatomegaly, or hematologic abnormalities, even if previous tests for syphilis have been negative at birth. The incidence of syphilis has reached epidemic proportions in some areas. In New York the rate of primary or secondary syphilis in women rose only marginally between 1983 and 1986 but it increased almost four-fold between 1986 and 1988. In the same two year period the number of reported cases of congenital syphilis rose from 57 to 357. The pediatrician's suspicion of congenital syphilis must remain high to avoid misdiagnosis. (McIntosh K. Congenital syphilis - breaking through the safety net. Editorial. N Engl J Med Nov 8, 1990; 323:1339-1341).

SEIZURE DISORDERS

ACETAZOLAMIDE MONOTHERAPY FOR MYOCLONIC EPILEPSY

Chronic acetazolamide monotherapy controlled generalized tonic-clonic seizures in 14 of 31 patients with juvenile myoclonic