Adult Lead Poisoning from the Use of an Asian Remedy for Menstrual Cramps—Example of an Epidemiologic Investigation

During a free lead-screening event, sponsored by a nursing school community health promotion center, a 33-year-old Cambodian woman who brought her two children to the center to be tested for lead poisoning also participated in being tested. She was found to have an elevated blood lead level (BLL) of 44 μg/dL and a confirmatory BLL 1 month later of 42 μg/dL. The children and her husband were found to have normal BLLs. This woman was referred by the director of the health promotion center for follow-up to the Connecticut Department of Public Health.

As the Connecticut Adult Blood Lead Surveillance Program’s Adult Lead Registry and Case Management Coordinator, I was responsible for compiling and analyzing BLL data from Connecticut laboratories performing these tests, and to follow up on any reports of elevated lead levels, such as this woman who was identified through a community screening event sponsored by a nursing school.

Although ideally there should be no lead in the blood, levels below 10 μg/dL are considered normal (because of ambient exposures), and any value above 10 μg/dL was considered abnormal and required follow-up regarding the cause. The Connecticut Adult Lead Poisoning Program is funded by the CDC’s Adult Blood Lead Epidemiology and Surveillance Program (ABLES), with a primary interest in studying and reducing occupational exposure to lead. In this particular case, occupational exposure was ruled out (she was not working), but an epidemiological investigation was still conducted to identify the source of lead exposure.

The woman was requested to send in any possible causes of lead exposure to the state health department. All these materials (tea, cosmetics, medicinal herbs, medication, etc.) were forwarded to the state laboratory for testing. Everything came back negative except for the little red pills (Koo Sar pills) the woman was taking for menstrual cramps. The investigation took many months to complete because the woman, who lived in Connecticut, bought these pills in Chinatown located in New York City and San Francisco. Follow-up with the New York City Health Department and San Francisco Health Department resulted in an additional contact with the California State Health Department.

All health departments involved also tested the Koo Sar pills they obtained for lead, and were found with varying amounts of lead. Eventually it was determined that lead was not a listed ingredient of these pills but a contaminant during the manufacturing process. The investigation was reported in an issue of the CDC’s Mortality and Morbidity Weekly Report. This report led to a greater awareness among public health professionals, health care providers, and environmental workers of the potential for lead poisoning from herbal remedies.

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For more information please see:


which may be vulnerable. Four types of immunity are important in community health: passive immunity, active immunity, cross-immunity, and herd immunity.

**Passive Immunity**

Passive immunity refers to short-term resistance that is acquired either naturally or artificially. Newborns, through maternal antibody transfer, have natural passive immunity that lasts up to 1 year for certain diseases (CDC, 2015d). This maternally provided protection seems to work best with measles, rubella, and tetanus, and less well with other diseases (e.g., polio and pertussis). Artificial passive immunity is attained through inoculation with antibody products to provide temporary resistance. Examples of such products include immune globulin (hepatitis A and measles), hyperimmune globulins (hepatitis B, rabies, tetanus, and varicella), and hyperimmune serum (equine antitoxin for use with botulism and diphtheria). These products are used to boost a susceptible person’s immunity, and administration must be repeated periodically to maintain immunity level (CDC, 2015d) (Fig. 7–10).

**Active Immunity**

Active immunity is long-term and sometimes offers lifelong resistance that is acquired either naturally or artificially. Naturally acquired active immunity comes through host infection. That is, a person who contracts a disease...