An Infectious Disease in an Adopted Infant Case Study

In February of 2001, a 10-month-old baby in Texas became ill with fever, conjunctivitis, and a maculopapular rash. The baby’s parents reported that the fever had begun during their recent flight from China, where they had adopted the child. The hospital where the child was taken conducted a thorough physical exam, making note of low-grade fever, cough, runny nose, and conjunctivitis. Raised bumps were apparent on the mucosal lining inside the cheeks.

A presumptive diagnosis was made based on the symptoms; blood was drawn, and the diagnosis was confirmed when high levels of a specific IgM were found. The diagnosis set off a flurry of activity because the disease is relatively serious and highly contagious. Furthermore, the baby could have potentially exposed hundreds of people during the incubation period preceding the flight home from China. First, of course, there were the other children and staff at the orphanage where the child lived. Also potentially exposed were 63 families that had traveled together to and from China on this trip and dozens of staff members at the Chinese hospital where medical exams were performed, as well as staff at the U.S. Consulate and passengers and crew on the two flights (from China to Los Angeles and from Los Angeles to Houston).

The Centers for Disease Control and Prevention worked together with the Central China Adoption Agency to identify contacts, isolate additional cases, and supply vaccinations where needed. Eventually, 14 cases of this disease were found in the United States, most of them babies from a single orphanage in China, or their U.S. contacts. Officials at the orphanage acknowledged that recent arrivals at the orphanage had not been adequately immunized against the disease. A vaccine against this disease has been widely used in the United States since the 1960s, but less developed countries may have low vaccination rates.

* *What is the disease described here?*
* *If a vaccine has been widely used in the United States for 40 years, why did American contacts of the child also become infected?*