

Unprotected People #20 Congenital Rubella Syndrome

Infant dies of congenital rubella syndrome

The following "Unprotected People" story was written for the Immunization Action Coalition and appeared in the Fall/Winter 1999–2000 issue of NEEDLE TIPS and the Hepatitis B Coalition News:

Rubella infection is usually a mild rash illness; however, during the first trimester of pregnancy, it can result in miscarriage, stillbirth, or an infant with a pattern of birth defects (i.e., congenital rubella syndrome [CRS]) as described in the following case report.

Case Report:

On April 15, 1999, a case of CRS was reported to the Arizona Department of Health Services in a 1½-month-old Hispanic infant. The infant was born prematurely at 34 weeks gestation. Complications noted at birth included pulmonary valve stenosis, patent ductus arteriosus, thrombocytopenia, congenital cataracts, intracranial calcifications, and probable hearing deficits. The 19-year-old foreign-born mother (gravida 1, para 0) had been living in the United States for two years prior to her pregnancy. She first obtained prenatal care at four months gestation, at which time she was rubella immune. She reported no rash during the first four months of pregnancy.

Although the neonate's rubella IgM test was positive shortly after birth, cytomegalovirus was suspected as the cause of the infant's congenital complications, in part due to the mother's rubella immune status.*

There was a three-week delay in reporting this CRS case to the county health department. The Maricopa County Department of Public Health immunized household contacts immediately after receiving this report. The day following vaccination, two of the household contacts, who had recently moved into the home and participated in the care of the infant, developed rubella-like rash. The duration

between the receipt of vaccine and the rash onset was too short for the rash to be caused by the vaccine. These contacts, however, could have been infected by the infant since infants with CRS can shed rubella virus for up to one year and can be the source for rubella outbreaks.

The infant died on June 9, 1999. The cause of death was listed as acute pulmonary hemorrhage as a consequence of complex congenital heart disease.

This is the fifth case of CRS reported in Arizona since 1994. In all five cases, the mothers were unimmunized, Hispanic, and foreign born.

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* Due to the timing of the mother's routine prenatal serology, it could not be determined when her infection in pregnancy occurred. The infant's defects, however, were consistent with rubella infection during the first trimester of pregnancy.

Rubella and Congenital Rubella Syndrome (CRS) Are Vaccine Preventable

Since the licensure of the rubella vaccine in 1969 in the United States, the incidence of rubella and congenital rubella syndrome (CRS) has decreased substantially. Reported rubella and CRS cases have been at record low levels since the mid-1990s.

Most of the reported rubella cases in the United States since the mid-1990s, have occurred among young Hispanic adults who were born in countries either without a national rubella vaccination program or where such programs were recently implemented. Since 1996, several rubella outbreaks have occurred in work places such as meat packing plants where a majority of the employees are foreign born.

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Almost all countries in the world have measles vaccination programs; however, in a World Health Organization survey of member countries in 1996, only 78 (36%) of the 214 member countries had national rubella vaccination programs representing only 20% of the global population. Because both are rash illnesses, many people confuse rubella and measles. In several of the recent outbreaks, many people thought they had been vaccinated for rubella, but instead they had been vaccinated for measles.

Action You Can Take to Prevent Rubella and the Subsequent Tragic Consequences of Congenital Rubella Syndrome

1. VACCINATE PERSONS WHO DO NOT HAVE DOCUMENTED PROOF OF IMMUNITY TO RUBELLA.

In the United States, children should receive the first dose of MMR vaccine at age 12–15 months and the second dose at 4–6 years of age. Persons who are born after 1957 and who do not have a medical contraindication should receive at least one dose of MMR vaccine unless they have documentation of vaccination with at least one dose of measles-, rubella-, and mumps-containing vaccine.

2. MAKE SURE YOUR FOREIGN-BORN PATIENTS ARE VACCINATED.

Rubella and CRS are at record low levels in the United States, primarily due to the success of the rubella vaccination program. However, rubella vaccination programs have only recently been introduced in many developing countries and many foreign-born persons may not be immune to rubella.

3. THINK RUBELLA WHEN YOU SEE SUSPICIOUS RASHES.

Even though rubella is at record low levels, it still is introduced and it spreads in the United States. If someone presents with a rash illness that may be consistent with rubella or measles, rubella needs to be ruled out. Obtaining a rubella-specific IgM blood test is critical.

4. THINK CRS WHEN YOU SEE ANY CONGENITAL MALFORMATION CONSISTENT WITH CRS.

CRS is rare in the United States, however, it does occur. In an infant born with ANY congenital malformation consistent with CRS, do not assume that a positive rubella titer drawn during pregnancy rules out CRS. If you suspect CRS, obtain a rubella-specific IgM blood test.

5. REPORT ALL CASES OF RUBELLA AND CRS TO YOUR LOCAL OR STATE HEALTH DEPARTMENT.

Once a case of rubella or CRS has been identified, the health department must be contacted immediately. All cases should be investigated and control measures implemented.

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DON'T MISS THE DIAGNOSIS OF CONGENITAL RUBELLA SYNDROME! Classical findings include congenital heart defects, cataracts, and hearing loss.