



CONGENITAL RUBELLA SYNDROME (CRS) IN AN INFANT BORN IN MASSACHUSETTS 2017

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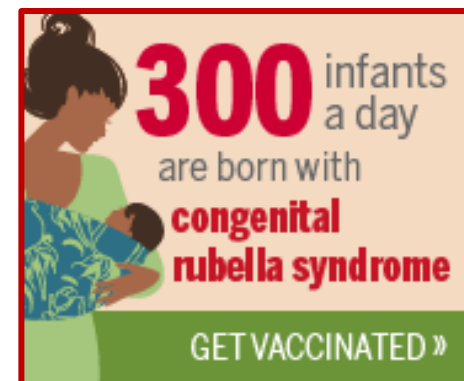
Congenital Rubella Syndrome (CRS)

2

- Maternal rubella infection, especially during the first trimester can cause multiple serious birth defects in the fetus. Baby can remain infectious for one year or longer.
- More than **100,000** children are born every year with CRS, mainly in Africa, South-East Asia, and the Western Pacific.
 - ▣ Rubella vaccine coverage in Africa only about 10%
 - ▣ CRS incidence in Africa is estimated to be 100 to < 150 per 100,000 live births in over 20 countries
- Rare in U.S., 45 cases of CRS reported from 1998 – 2017 (to date). Over 85% of mothers were born outside of the US.



Source of photo: CDC



Case Overview

3

- **Early 2017: First Massachusetts case in over 20 years. MDPH notified on weekend approximately four days after birth by tertiary care hospital.**
 - ▣ Mother was from Africa: one US prenatal visit prior to delivery of infant. (~24 weeks gestation - Provided an ultrasound report done at 22 weeks – normal. Anther ultrasound done at 24 weeks was normal as well.)
 - Mother tested for rubella immunity during 2nd trimester and had a positive IgG titer at a commercial lab. Most likely had rubella in first trimester. She mentioned experiencing malaria-like symptoms twice during early pregnancy.

Case Overview,(cont.)

4

- Mother returned to MA for delivery and delivered a full term infant born at an out-lying hospital with cataracts, hearing loss, hepatosplenomegaly, thrombocytopenia, hypoglycemia, petechiae on face, metaphyseal lucencies. (No major cardiac abnormalities.)
- Testing requested for multiple possible causes of baby's illness, including rubella.
- Not on contact precautions initially – multiple possible exposures
- Bilateral cataract surgery; multiple transfusions, gastrostomy tube placed due to failure to thrive, fitted for contact lenses

Case Overview,(cont.)

5

- Family (mother, father, sibling and grandmother) alone in U.S. and living distant from hospital where infant received care for >3 months.
- Evidence of immunity required: father, older sibling and mother-in-law, nanny, other visitors and care providers

Discharge and Departure

- Discharged home when a little over ~3 months of age with a gastrostomy tube and contact lenses.
- Upon infant's discharge
 - ▣ Mom trained in care for g-tube and weekly replacement of contact lenses.
 - ▣ Nanny hired so mom could run basic errands without infant.
 - ▣ Many challenges – isolation, transportation, monetary

Case Overview,(cont.)

6

- MDPH worked with:
 - ▣ Local hospital
 - ▣ Tertiary care hospital
 - ▣ LBOH and Boston Public Health Dept.
 - ▣ Monthly PCR test results (urine, NPS) have all been positive to date except for negative urine at 6 months (when family left the US)

CRS Recommendations

7

- Immunity to rubella should be documented in ALL pregnant women.
- If not immune, or status unknown, vaccinate.
 - ▣ Before pregnancy
 - ▣ Or before discharge after delivery
 - ▣ Or at the first post-partum visit
- High index of suspicion with recent arrivals to US who were born outside of US.
 - ▣ Ask about exposure to rash illness during pregnancy
- Consider CRS in infants with symptoms consistent with CRS, especially in foreign-born or recently-arrived mothers, and place on contact precautions.
- Infection Control is Critical: Infants can shed the virus for prolonged periods (up to 1 year of age or longer)
 - ▣ Education of parents and care providers; screening of HCWs; clear descriptions of limits to public activities while infectious