

A Preventable Reason of Mortality in Neonatal Period: Congenital Rubella Syndrome

Dear Editor,

Rubella is one of the most teratogenic intrauterine viral infections. The commonest findings are heart defects, cataracts, low birth weight, hepatosplenomegaly and microcephaly.¹ Universal screening and follow-up of vaccination for women at childbearing age is highly recommended.

A 37 week term male baby was born with prenatal oligohydramnios and intrauterine growth arrest. Mother was not immunised with Measles-Mumps-Rubella (MMR) and serology for Toxoplasma-Rubella-Cytomegalovirus-Herpes (TORCH) was screened at 8th week of gestation. Both Rubella Ig M and Ig G were negative. There was no history of fever or rash during pregnancy, but the mother had aseptic arthritis during gestation. Positive findings on physical examination were low birth weight (1785 grams <10th percentile), height was 40 cm (<10th percentile), head circumference was 29 cm (<10th percentile) fulfilling the criteria for symmetric small for gestational age. There was a 3/6 systolic cardiac murmur. In laboratory tests, he had thrombocytopenia, direct bilirubinaemia and deranged coagulation tests. Chest X-ray showed cardiomegaly and echocardiography showed aortic stenosis, atrial and ventricular dilatation. He had no dysmorphic features, no rash, sepsis screen was negative. Hearing test, eye examination and transfontanel ultrasonography were normal.

Based on positive findings in addition to maternal history of aseptic arthritis and oligohydramnios, intrauterine infections screened was performed. Mother's Rubella serology revealed an increase in Rubella specific IgG:178.1 with specific IgM:0.391. The results of baby for rubella specific IgM and IgG were 0.307 and 171.3, respectively. Moreover avidity of Rubella IgG was 73 (>60%; high). Based on clinical and laboratory findings, the baby was diagnosed to have congenital Rubella syndrome (CRS). He developed multi-organ dysfunction and died at the 22nd day of birth.

According to a study of 238,000 children with CRS born worldwide annually, majority of cases were from developing countries. Evaluating overall incidence of Rubella immunity in mothers during the first trimester, 45% of women were shown to be susceptible to Rubella infection.² The most important issue is that CRS is a cause of preventable morbidity and mortality in newborn period.^{1,3}

Exposure to rubella in the first trimester of pregnancy in those with no or declined vaccine induced immunity, usually results with subclinical infection in the mother which can cause CRS. Fever and rash is not a must for infection, findings like aseptic arthritis as in the mother reported in our case should also be taken into consideration. In vaccinated or exposed cases; rubella antibodies decline over time and may increase the risk of reinfection.⁴ American Academy of Pediatrics recommends 2 doses of Rubella vaccine during childhood. Detailed vaccination history should be taken from girls in the reproductive period and if the 2nd dose of MMR is absent, vaccination should be done.⁵ In conclusion; unlike CMV and HSV infections; CRS is a preventable reason of mortality and morbidity in newborns. So screening and vaccination strategies against Rubella for women at childbearing age should be considered.

References

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