



Case Report

Is German Measles Really Uncommon in our Community? A Report from Personal Observation

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Abstract

Although German Measles is a mild exanthematous illness, because of the immense teratogenic potential of the virus, it can have disastrous consequences in women of reproductive age group if contracted during pregnancy. The data about the prevalence of rubella infection in Bangladesh is sparse. This paper presented here, with the aim to ventilate the occurrence of rubella infection in the community and make aware doctors community about this viral infection burden that may have sometimes very disastrous consequences like many congenital birth defects. We are reporting several cases of German Measles occurring in Rajshahi city.

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Introduction

Rubella (German measles) as a clinical entity was first described by German authors in the mid 18th century and they called it Rothein¹. Although it is a mild exanthematous illness, because of the immense teratogenic potential of the virus, it can have disastrous consequences in women of reproductive age group if contracted during pregnancy. The disease has not been a major concern for most practitioners the world over, but for doctors in the field of Obstetrics and Neonatology it is of major concern. The congenital rubella syndrome (CRS), an important sequelae to infection of the mother during pregnancy comprises of growth retardation, eye defects, deafness, cardiac defects, microcephaly, mental retardation, hepatomegaly, hepatitis, bone lesions, interstitial pneumonitis, diabetes mellitus and

psychiatric disorders². The exact disease load in the community cannot be made out clinically as more than half of all cases are subclinical. Incidence of rubella, in developing countries, has shown to rises slowly during the first 4 years and then rapidly reaches the peak between 5 and 9 years of age³. But the major reason of its attention is due to the teratogenic effects when rubella is contacted in early stage of pregnancy. Around 10% of women reach child-bearing ages are still susceptible to rubella infection^{4,5}.

The data about the prevalence of rubella infection in Bangladesh is sparse. This paper presented here, with the aim to ventilate the occurrence of rubella infection in the community and make aware doctors community about this viral infection burden that may have sometimes very disastrous consequences like many congenital birth defects.

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Observation

A 36 year female, resident of laxmipur Rajshahi attended in private practice chamber with the complaints of fever, exanthematous rash. She was suspected as measles after thorough history and physical examination and notified local concerned person for collection of blood for serologic confirmation. They contacted with this affected lady for more clinical details. At the same time neighbour of this infected woman were interrogated for similar symptoms. Interestingly it was found that another nine individuals around her

residence had same type of clinical illness at that particular time. The notified authority also took blood sample from these affected people. The sample was sent to national polio and measles laboratory, Dhaka for serological test for measles and rubella. Among 10 sample, nine (90%) gave positive result for acute rubella infection indicated by presence of rubella IgM antibodies in their serum. Out of 09 acute infection of rubella, 02(22.2%) were adult female of reproductive age group. The clinic-pathological profiles of enrolled patients were given in table below.

Table 1: Patients profile with Rubella antibody results

Labcode	Upzimuncc	Village	Name	Age in years	Date of Onset	Date of specimen collection	Results of Measles IgM	Results of Rubella IgM
6840	Rajshahi CC.	Laxmipur	Asifa	5.6	13/03/2010	28/03/2010	Negative	Positive
6841	Rajshahi CC.	Laxmipur	Sadid	9.7	10/03/2010	28/03/2010	Negative	Positive
6842	Rajshahi CC.	Laxmipur	Samid	8.1	20/03/2010	28/03/2010	Negative	Positive
6843	Rajshahi CC.	Laxmipur	Khaleda	32.0	28/02/2010	28/03/2010	Negative	Negative
6844	Rajshahi CC.	Laxmipur	Chandni	8.9	10/03/2010	28/03/2010	Negative	Positive
6845	Rajshahi CC.	Laxmipur	Helena Pervin	35.0	22/03/2010	28/03/2010	Negative	Positive
6846	Rajshahi CC.	Laxmipur	Mohima	5.4	13/03/2010	28/03/2010	Negative	Positive
6847	Rajshahi CC.	Laxmipur	Raka	5.8	08/03/2010	28/03/2010	Negative	Positive
6848	Rajshahi CC.	Laxmipur	Shanto	13.7	10/03/2010	28/03/2010	Negative	Positive
6849	Rajshahi CC.	Laxmipur	Swety	10.6	09/03/2010	28/03/2010	Negative	Positive

Discussion

Rubella infection has an incubation period of 2 to 3 weeks with an average of 18 days. A large percentage of infections (50 to 65 %) are asymptomatic. In a typical case, postauricular and posterior cervical lymphadenopathy appears as early as 7 days before the rash. Rash, often the first indication of disease in children, appears on the face on the first day and disappears altogether by the 3rd day. It is absent in subclinical cases⁶. The immunity to acute infection starts developing in 5 to 10 days of infection when IgM appears, which peaks at around 20 days, starts falling by 4-5 weeks and disappears by 4-5 months but low levels may last up to 1 year. IgG especially IgG1, starts appearing in about 15-20 days of infection, peaks at 1 month, maintains a high level for a year, then falls but persists practically for life.

About 25–50% of rubella infections are subclinical. The worldwide rubella pandemic in 1962–1965 highlighted the importance of

congenital rubella syndrome (CRS)⁷. It is estimated that more than 100,000 cases of CRS occur every year in developing countries alone. All the cost–benefit studies of rubella vaccination, in developing and developed countries, have found firmly in favour of the rubella vaccination, which is economically justified, especially when combined with measles and mumps vaccine⁶. A study in Bangladesh revealed a significant number of children (>3 months to 5 years) unprotected from rubella. However, rubella-specific IgG was found in 71% subjects with the age group of 10–15 years⁸ and this trend is supported in the observation of Singla et al.⁶ in a cohort of Indian population. It was clearly observed in the study that a significant number of children below 10 years remain susceptible to rubella infection. From present study also depicted that some people including adult female remains unprotected and carries high risk to deliver many rubella related congenital defective baby that can be very burden to society as well as country.

Until recently, data on the epidemiology of rubella in Africa have been very scarce. However, several sero-epidemiologic surveys within the last 10 years show that the virus is prevalent throughout Africa. In most of Africa rubella is contracted early in life; in areas such as the Gambia, Egypt, Zimbabwe, Mali, and parts of Kenya >80% of children are immune to the virus by 10 years of age, and this level increases through adulthood. Most studies show that >80% of pregnant women are immune to rubella⁹.

Conclusion

High susceptibility to rubella, especially in children and young adult women was prevalent in the study. A large nationwide serological study is needed to find the exact scenario of rubella seropositivity and susceptibility of infection. A policy of immunization with MMR or rubella vaccine of susceptible, non-immune adolescent girls is highly desirable in order to prevent rubella and congenital rubella syndrome.

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