

RUBELLA IN CHANDIGARH

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SUMMARY

During 1988 serum samples from 14 pregnant women suspected of rubella infection and 10 non-pregnant women with rubella like illness residing in a hostel were tested by Haemagglutination Inhibition test against rubella antigen and ELISA for IgM antibodies to rubella. Evidence of rubella infection was detected in 7(50%) of pregnant women and 9(90%) of the non-pregnant women. All rubella infections occurred during the months of February and May. These observations suggest that rubella virus was active in Chandigarh during 1988.

INTRODUCTION

Serological surveys conducted in different parts of India have show that 14% of women in the child bearing age are susceptible to rubella (Seth et al 1971, Chakrabarty 1973, Pal et al 1974, Mathur 1974, Lakshminarayana et al 1975). Recently an increase in the incidence of acute rubella infection among pregnant women during the months, March-May 1988 was reported from Delhi (Kishore et al 1990). During the same period of the year many women with rubella like illness attended the Nehru Hospital, PGIMER, Chandigarh, for medical advice. the serological finding of these patients is reported in this communication.

MATERIAL AND METHODS

Serum samples from 24 women suspected of rubella during 1988 were tested for evidence of recent rubella infection. Of these, 12 samples were from pregnant women with rubella like rash, and 2 were from pregnant women who had contact with individuals having rubella like illness. The rest 10 samples were from-pregnant women who were residing in a hostel in the PGIMER Campus. Nine of them were student nurses who developed rubella like illness during the period 10 April to 22 May, 1988. The other one was a research student living in the hostel. Paired sera were available only from 4 pregnant women.

The paired serum samples were tested for rubella haemagglutination inhibition (HAI) antibodies using heparin - $MnCl_2$ to

remove the nonspecific inhibitors (Herrmann 1979). A four fold rise or fall in antibody titre in paired samples was considered as evidence of recent infection.

The serum samples from all non-pregnant women, 10 pregnant women, and from the husband of one of them with rubella like illness, were tested for rubella specific IgM, using Micro ELISA kit (Diamedix Corp; USA). The serum samples with 50 ELISA units/ml were considered positive.

OBSERVATIONS AND DISCUSSIONS

There are only two reports from India documenting the evidence of acute rubella infection among adults (Kishore et al 1990, Seth et al 1985). In the present study, among the 24 females suspected of rubella, 16 (67%) had evidence of recent rubella infection. The proportion of acute rubella infection in pregnant and non-pregnant women was 50% and 90% respectively (Table I). Two of

the 7 pregnant women with rubella infection could be followed up. One of them who had contracted rubella in the second trimester of pregnancy delivered an apparently normal baby, whereas the other pregnant women who also had contracted rubella in the second trimester aborted. Among the two pregnant women without any clinical features of rubella, one had serological evidence of recent rubella infection. This patient probably acquired the infection from her husband who had clinical features of rubella and specific IgM in his blood.

It was of interest to note that among the 16 women who had serological evidence of acute rubella infection (Table I), 15 reported during the months of February through May, 1988. During the same period, clustering of rubella cases was seen in Delhi (Kishore 1990) also.

The non-pregnant women residing in the nursing hostel, a semiclosed community,

Table I

Serological evidence of recent rubella infection among women tested

Patients	No. Tested	No. positive by HAI test* / IgM ELISA
Pregnant women with rubella like illness	12	6 (50)
H/o Contact with rubella like illness	2	1 (50) **
Total	14	7 (50)
Non-pregnant women with rubella like illness	10	9 (90)
Grand Total	24	16 (67)

* Paired sera.

** Husband's serum also had rubella specific IgM.
Figures in parentheses are percentages.

had rubella like illness, 9 (90%) of these 10 patients had evidence of acute rubella infection. Similar rubella outbreaks have been reported among hotel mates (Banatwala and Best 1984). Clinical rubella among nurses reported in the present study suggests the possible role that they may play in nosocomial transmission of the virus (Kotzen and Mets 1988).

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Table I

Serological evidence of recent rubella infection among women tested

Patients	No. Tested	No. positive by HAI test* / IgM ELISA
Pregnant women with rubella like illness	12	9 (75)
Ho Contact with rubella like illness	2	1 (50)**
Total	14	10 (71)
Non-pregnant women with rubella like illness	10	9 (90)
Grand Total	24	19 (79)

* Paired sera.
 ** Husband's serum also had rubella specific IgM.
 Figures in parentheses are percentages.