

## LETTER TO EDITOR

### RUBELLA POSITIVE IN PREGNANCY: FACT OR FAUX!

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Received: 24 August, 2018/ Accepted: November, 2018

**ABSTRACT:** Rubella in pregnancy is associated with adverse fetal outcome. As such the diagnosis of active rubella infection in a young women carries a significant importance for deciding the conception and course of pregnancy. The usual tests that are used in the diagnosis of rubella are based upon antibody detection. These tests are required to be interpreted in the context of pregnancy very carefully. In some cases the IgGavidity testing for rubella are required to be tested.

**KEYWORDS:** Rubella, pregnancy, serological tests, antibody

### LETTER TO EDITOR:

Dear Sir,

Rubella is a disease of significant public health importance in view of its propensity to cause complications during pregnancy. Rubella in pregnancy especially in first trimester has been linked with a high risk of development of congenital rubella syndrome (CRS), but spontaneous abortions have also been reported in literature<sup>1</sup>. With increasing number of laboratories offering the test for Rubella as a part of antenatal workup, it is of utmost importance to know when to test and how to interpret the results received. Diagnosis of rubella in pregnancy has important clinical implications and clinicians, obstetricians as well as anyone else involved in ante natal care should be well trained to know about relevance and interpretation of appropriate test for rubella in pregnancy.

With increasing number of patients being referred to our infectious disease clinic during ante natal workup, a myriad of scenarios develop requiring in-depth analysis and deliberations regarding appropriate interpretations and clinical decision,

These clinical dilemmas prompted us to analyze intensely. To share clinical approach and to throw some light on this neglected but very pertinent issue of concern in pregnancy this communication was drafted. A patient presented to us with report of Rubella IgM positive and history of past first trimester abortion. What should be the next step in such a scenario?

In such cases, one step should be to confirm past infection, which can be done by performing IgG

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avidity testing. Seropositivity (by ELISA) has its limitation and its interpretation should be done keeping in mind the possibility of any cross reaction, false positivity and long persistence of residual antibodies after a previous primary infection. Rheumatoid factor can also cause false positive results. Currently many tests are available with different principle for serological testing for rubella. These serological tests, based on the principle of enzyme immunoassays for quantification of Rubella virus IgG are widely calibrated against the World Health Organization (WHO) international standard. As such the results are reported in international units per milliliter<sup>2</sup>. Reliance on serology alone can be deceptive and the final diagnosis should always be confirmed by avidity testing or immunoblot test<sup>3</sup>. Individuals who are immune to rubella, either by natural infection or by receiving rubella vaccine can still be re-infected when re-exposed. However, this re-infection is usually asymptomatic and detectable only by serologic means. Viremia and congenital rubella in maternal re-infection appear to be very rare events.

In a study done by Thayyil J et al, 2016 found that 68.3% of the total female population who are unvaccinated could still have protective antibodies against rubella through natural infection but remaining 32 % would be susceptible<sup>4</sup>. So, to prevent the complication of rubella infection in pregnancy, appropriate screening of protective immunity, by high titres of rubella specific IgG antibodies should be done in pregnant females<sup>5</sup>. Also, the effect of the virus in pregnancy can be devastating, therefore all females should be encouraged for rubella vaccination.

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**CONFLICT OF INTEREST:** Authors declared no conflict of interest

**SOURCE OF FINANCIAL SUPPORT:** Nil

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**Cite of article:** [Baidya A, Kodan P, Basu A, kumar P, Jorwal P; Rubella positive in pregnancy: fact or faux!. Int. J. Med. Lab. Res. 2018, 3\(3\):37-38](#)