

Atypical Presentation of Adult Rubella

B Jayaprakash, MD*, V Sudha, MD**, U Shashikiran, MD*

*Departments of Medicine, Melaka Manipal Medical College, 75150 Melaka, Malaysia, **Kasturba Medical College, 576119 Manipal, India

Summary

A 55 year old female presented with fever, skin rash and subconjunctival hemorrhage. She also developed hepatitis. Fever and skin rash lasted for more than three weeks. This patient was diagnosed to have rubella, highlighting the fact that rubella can present with atypical features like prolonged fever and rash, subconjunctival hemorrhage and hepatitis, especially in adults.

Key Words: Adult rubella, Prolonged fever, Rash, Hepatitis, Subconjunctival hemorrhage

Introduction

Rubella is an acute viral infection, usually mild and of short duration, that characteristically includes fever, rash and lymphadenopathy and has a broad spectrum of other possible manifestations. Atypical presentation is more common in adults. Here we present a case of rubella in an adult female who had high grade fever and rash for more than three weeks, and developed subconjunctival hemorrhage and hepatitis.

Case report

A 55 year old female presented with complaints of fever of seven days duration associated with generalized body ache and joint pain, and non pruritic skin rash all over the body. These symptoms were accompanied by sore throat at the beginning. She was treated with amoxicillin and paracetamol during this period by a general practitioner. She was a known asthmatic for 20 years, but she did not have severe cough during the present illness.

On physical examination she was febrile (T – 38.9°C). There were macular erythematous non blanching skin rashes all over the body, predominantly over the face

and trunk. Bilateral epitrochlear (2 x 1cm) and left supraclavicular (1.5 x 1cm) lymph nodes were enlarged, discrete, non tender and firm in consistency. There was conjunctival congestion with bilateral subconjunctival hemorrhage. The systemic examination was unremarkable except for few crepitations in the right infrascapular area and mild hepatomegaly.

Keeping in mind the common diseases in South India the differential diagnosis of leptospirosis, hemorrhagic fever of viral or rickettsial origin, enteric fever and malaria were considered and investigated accordingly. The complete blood count showed hemoglobin of 13g%, total WBC count of 5,600/ cmm with neutrophils -80%, lymphocytes-19% and eosinophils -01%; platelet count was 220,000/cmm (on admission) dropped to 190,000/cmm after one week; ESR of 40 mm/ 1 hr; the blood peripheral smear examination was normal; Quantitative Buffy Coat (QBC) for malarial parasite was negative; creatinine kinase was 136 IU/L; liver enzymes were elevated - AST:70 IU/L (15 IU/L after two weeks), ALT :74 IU/L (39 IU/L after two weeks) and ALP (320 IU/L) was normal; blood glucose, BUN, s. creatinine, s. electrolytes, s. bilirubin and BT, CT, PT were within normal limits.

This article was accepted: 25 November 2005

Corresponding Author: Shashikiran Umakanth, Melaka Manipal Medical College, 75150 Melaka, Malaysia

Chest X-ray and ECG were normal. The abdominal ultrasound examination showed only mild hepatomegaly. The urine examination showed trace protein and 2-3 WBCs / HPF. After collecting the blood and urine for culture and sensitivity the patient was treated empirically with parenteral ceftriaxone, amikacin and crystalline penicillin in adequate doses considering the possibility of leptospirosis and enteric fever being endemic in our area. The Widal test, Ig M leptospira, HBsAg, ELISA for HIV, VDRL, Paul Bunnell test were all reported negative after one week. The bone marrow aspiration and biopsy revealed reactive marrow with early megaloblastic changes. As part of the work up for PUO the cervical lymph node biopsy was done, but was inconclusive. The blood, urine and bone marrow cultures were sterile.

She continued to have high grade fever in spite of giving adequate doses of paracetamol and antibiotics. Since there was no improvement after administering antibiotics for one week and all the culture reports were negative, the antibiotics were stopped considering the possibilities of drug fever and rash. But the fever and skin rash persisted even after withholding the antibiotics for 72 hours. The blood was sent for serological study (ANA, ELISA for Ig M rubella and dengue).

The patient was discharged at request after 20 days of hospitalization in spite of persistent fever. The skin rash and subconjunctival hemorrhage disappeared two days before discharge. She was advised to take doxycycline 100mg twice daily for seven days considering the possibility of rickettsial fever. When she came for review after one week she was afebrile for more than 72 hours and the enlarged lymph nodes regressed to normal size. The ELISA for Ig M rubella was positive. The blood sent again (ten days after the first sample) for repeat Ig M rubella serology also showed positive result.

Discussion

Rubella is an acute viral infection of children and adults, usually mild and of short duration (approximately three days) that characteristically includes rash, fever and lymphadenopathy and has a broad spectrum of other possible manifestations. A high percentage of rubella infection in both children and adults are subclinical¹. In our case the symptoms were unusually severe and lasted for a long time.

A prodromal phase is uncommon in children; adults may have more severe disease with a brief prodrome of malaise, fever and anorexia. The foremost symptoms of postnatally acquired rubella include posterior auricular, cervical, and suboccipital lymphadenopathy, fever and rash. The rash often begins on the face and spreads down the body. It is maculopapular but not confluent, sometimes accompanied by mild coryza and conjunctivitis, and generally lasts for 3-5 days. Fever may be absent entirely or may be present for only several days in the early phase of the illness¹. However, our patient had enlargement of bilateral epitrochlear and left supraclavicular lymph nodes, fever for four weeks and rash for nearly three weeks.

Because of the severity of symptoms, findings on clinical examination and endemicity patterns, we considered the differential diagnosis of leptospirosis, enteric fever, malaria and hemorrhagic fever of viral or rickettsial origin and investigated accordingly. All these tests were negative.

Since postnatally acquired rubella is such a mild disease and many are subclinical, diagnosis on clinical grounds can be difficult. The isolation of rubella virus in cell cultures of throat samples, urine, or other secretions is difficult and expensive. A laboratory diagnosis is most often made serologically. The most commonly used test is ELISA for rubella specific Ig G and Ig M antibodies. Acute rubella is diagnosed by the documentation of a four fold rise in the titer of Ig G antibodies in paired acute and convalescent phase serum samples or by the detection of rubella specific Ig M antibodies in one serum specimen. However, false positive and false negative Ig M reactions are sometimes obtained¹. In our case there was no epidemic in that area. Though the presentation had difficulties in diagnosis, the elaborate investigations helped us to clinch the diagnosis. The final diagnosis of rubella was made based on repeat serological test (ELISA for Ig M rubella).

Complications of postnatally acquired rubella are uncommon. Mild hepatitis is an unusual complication which we observed in our case¹. Hepatic damage with rubella is rare, and it is possible that the hepatic dysfunction seen in adult rubella may be mediated by an immunologic mechanism². Another complication is hemorrhage due to both thrombocytopenia and vascular damage, which occurs in one of every 3,000 patients¹. The subconjunctival hemorrhage in our case is probably due to vascular damage as there was no

CASE REPORT

documentation of thrombocytopenia on repeated testing and she had not received any drug that would have caused platelet dysfunction. Other possibility being acute conjunctivitis itself. The skin rash and subconjunctival hemorrhage disappeared before discharge and when the patient came for follow up at one week, the fever and lymphadenopathy had subsided without any specific treatment.

This case highlights the fact that rubella can present with atypical features like high grade fever of long duration, subconjunctival hemorrhage and hepatitis, in the older age group especially in unvaccinated persons and may cause confusion in diagnosis of exanthematous febrile illnesses.

References

1. Gershon A. Rubella (German measles). In: Braunwald E, Fauci AS, Kasper DL, Hauser SL, Longo DL, Jameson JL editors. Harrison's principles of internal medicine. 15 ed. New York: Mc Graw Hill medical publishing division; 2001; 1145-47.
2. Tameda Y, Kosaka Y, Shiraki K, Ohashi Y, Hamada M, Miyazaki M *et al*. Hepatitis in an adult with rubella. Intern Med.1993; 32(7): 580-3.
3. Fukuyama J, Hayasaka S, Yamada K, Setogawa T. Causes of subconjunctival hemorrhage. Ophthalmologica. 1990; 200(2): 63-7.