

Fever - Endemic Typhus in Jammu ?

Davinder Singh Jasrotia, Mohan Lal

For the last five or six years, Government Medical College and Hospital Jammu has been receiving many patients of an unknown illness. The cases start as trickle in ending June, a trickle which soon turns into a deluge by ending August when about five or six patients are received everyday in the emergency wing. What is so dramatic is that all these are coming from Noushehra and adjoining areas of a district Rajouri in Jammu Province. By the time these patients come to Jammu, they have already received antimalarias and antibiotics like ampicillin, penicillin and ceftriaxone but without any effect at all. The cases have responded to doxycycline and we have reasons to believe that these patients are suffering from endemic typhus.

Recently, a 20-year old female was brought to the hospital with a history of fever of about a week's duration. The fever was high-grade and continuous. On the third day of illness, she started with facial puffiness and ankle swelling. The very next day, there was abdominal pain and metrorrhagia. By now, the patient had cough and was breathless even at rest. She was drowsy and had subconjunctival haemorrhage at the time of hospitalization. She also had tachycardia, tachypnoea, bilateral pedal oedema and facial puffiness. Jugular venous pressure was normal. She had bilateral crepitations. Haemoglobin of 8-g% with TLC of 5000 cubic mm; renal and liver function tests were normal; x-ray chest revealed pulmonary oedema; echocardiography

revealed normal cardiac functions. She was put on doxycycline (100 mg twice a day). Her general condition improved the next day but then she developed left lateral rectus palsy. CT scan of the brain was normal. The medication was continued and she became afebrile by the third day while squint took another week to go. She was discharged after fourteen days of hospitalisation. Serological test for *R. typhi* was positive.

Decision to put the patient on doxycycline was taken in the light of past experience with such fever. Doxycycline therapy for such fever was started almost empirically, when about one year back, a male of about 20 years presented to the hospital with the complaints of fever, bilateral swelling of the feet, dyspnoea, non-cardiogenic pulmonary oedema, renal impairment, anemia and thrombocytopenia. He had received about two week's therapy of ceftriaxone without any response. Doxycycline was added and the patient responded so dramatically that he became afebrile within twelve hours of therapy. Since then, many patients from Noushehra with similar complaints have responded to doxycycline. The fever is also known to show good response to chloramphenicol. This fever is known to respond to chloramphenicol but not to ceftriaxone so it was being thought that resistant mutant of salmonella typhi was being encountered. The most important point however is the dramatic response to doxycycline.

From the Postgraduate Department of General Medicine, Govt. Medical College, Jammu (J&K).

Correspondence to : Dr. Davinder Singh Jasrotia, Registrar, Department of Medicine, Govt. Medical College, Jammu (J&K).



In light of clinical features and response to the therapy, a valid reasoning can be applied to unravel the aetiology of this "enigmatic" fever. Is it a viral illness? Response to doxycycline means that it is a bacterial illness. What type of bacteria is it? The one that does not respond to penicillins, ampicillin and cephalosporins but to doxycycline. So it can be brucellosis or plague or mycoplasma or one of the rickettsial infections. Clinical presentation effectively rules out plague. Can it be brucellosis? Two points are against this. One, dramatic response to doxycycline as monotherapy. Two, response to chloramphenicol. What is the organism that responds to doxycycline or chloramphenicol (but to no other antibiotics)? The answer is simple. The organism is a rickettsia.

Next part of the query is to find out which rickettsial organism are we dealing with. Low frequency of rash rules out spotted fevers; absence of vesical and eschar rules out rickettsialpox and scrub typhus. We are now left with either epidemic or endemic typhus. Myalgias are prominent both in epidemic typhus and endemic typhus. In the disease under consideration, we find a low frequency of rash, prominent pulmonary involvement, abdominal pain, confusion, stupor and jaundice in various combinations. Anemia and leukopenia as well as

thrombocytopenia are present and above all, a seasonal trend is being encountered. All this favours that this disease is most likely endemic typhus. Endemic typhus was first reported in 1913 by an Atlanta physician who designated the clinical features in six cases (1). Murine typhus is a good example of a disease whose importance is inadequately appreciated except in the patient and even today in most parts of the world he will never know what ails him because the diagnosis will not be made (2).

The triad of fever, headache and rash is seen only in 13% of cases. Rash is seen in only 20% of blacks. Illness frequently incapacitates for 2 weeks. Multisystemic vascular infection is suggested by nausea (48%), abdominal pain (27%), diarrhoea (26%), cough (35%), raised serum transaminases (90%), and CNS abnormalities (8%). In endemic typhus damage to CNS is generally much less extensive and fatalities are rare (3).

References

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