



Rickettsiosis: A Re-Emerging Condition, Case Reports From Central India

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Abstract

Rickettsial diseases in the form of spotted fever group as well as scrub typhus, are the vector borne zoonotic diseases accidentally infecting humans and presenting with non specific acute febrile illness which can be complicated with my multi organ involvement. By reporting cases from Central India, this article intends to draw attention over the fact that, rickettsial diseases are no more a rare entity and should be actively investigated as a potential cause of fever of unknown origin.

Keywords: NIL

Introduction

Rickettsial diseases are rarely diagnosed in India because of non-specific clinical presentation, low index of suspicion and lack of adequate diagnostic facilities.¹ For reasons that are unclear, the recorded incidence of Rickettsiosis dropped off for several decades, however, recently due to frequent outbreaks witnessed in different parts of India, it is being described as a re-emerging infectious disease.² By reporting cases from Chhattisgarh, this article intends to draw attention over the fact that, rickettsial diseases are not a rare entity and should be actively investigated as a potential cause of fever of unknown origin.

Case 1- Spotted Fever Group Rickettsiosis

A 60 years old female, from rural background, associated with farming occupation, presented with high grade intermittent fever since 10 days, petechial rashes over trunk and lower limbs and altered sensorium since 2 days. On examination she was febrile, tachypnoeic, had tachycardia, generalized edema, maculo-papular rash over bilateral lower limb, soles and trunk. She was conscious, with slow

and slurred responses to commands. Rest of systemic examination was normal. She was admitted and given empirical treatment with intravenous Inj. Ceftriaxone 2 gm B.D.

Investigations showed Hb 11.4 gm%. TLC 10,670/mm³ with normal differential count, thrombocytopenia (40,000/mm³). S. Urea 76 mg%, S. creatinine 1.9 mg%, S. Total bilirubin 3.2mg%,(Direct Bilirubin-2.3 mg%) SGOT 62 IU/L, SGPT 48 IU/L, S. alkaline phosphatase 229 IU/L, LDH- 892 IU/L. WIDAL, Peripheral blood smear for malarial parasite, blood culture, urine culture, dengue serology and chest X- ray were all negative. CSF examination was insignificant and confirmed absence of meningococci on gram staining. Scrub typhus immunochromatography was also negative. However Weil felix confirmed positive titres for all, OX19(1:160), OX2(1:80) and OXK(1:160).

The condition of the patient deteriorated and she developed hypotension on day 3. In addition to fluids and inotropic support, intravenous Doxycycline (100 mg twice daily) was started after confirmation of etiology. There was good clinical response to

doxycycline and patient became afebrile, normotensive without support and fully conscious within 48 hours of starting treatment with doxycycline and was discharged on day 10. Her well being was confirmed on follow-up after 1 month.

Case 2-Scrub Typhus

A 55 years old female, from tribal background, laborer by occupation, presented with high grade intermittent fever since 15 days, and altered sensorium since 3 days. Patient was initially admitted at a peripheral hospital, and misdiagnosed for urosepsis and managed empirically with meropenam, metronidazole, Levofloxacin and was on inotropic support. On examination she was febrile, hypotensive (BP- 80/50 mmHg on inotropic support), had tachycardia, and a painless eschar was observed over the abdomen, about which patient was unaware. She was unconscious with neck stiff terminally, and responding to deep pain stimulus. Rest of systemic examination was normal. She was admitted and given

empirical treatment with intravenous Inj. Doxycycline 100mg BD, considering presence of eschar.

Investigations showed Hb 8.8 gm%. TLC 12,200/mm³ with normal differential count, thrombocytopenia (70,000/mm³). S. Urea 162 mg%, S. creatinine 5.5 mg%, S. Total bilirubin 3.5mg%,(Direct Bilirubin-2 mg%) SGOT 356 IU/L, SGPT 221 IU/L. Widal test, peripheral blood smear for malarial parasite, blood culture, urine culture, dengue serology and chest X- ray were all negative. USG abdomen was suggestive of hepatosplenomegaly. Scrub typhus immunochromatography was positive for IgM. There was good clinical response to doxycycline and patient became afebrile, normotensive and fully conscious within 72 hours of starting treatment with doxycycline and was discharged on day 15. Her well being was confirmed on follow-up after 1 month.

Figure 1: Eschar Over Abdomen



Discussion:

It is an established fact that rickettsial diseases are a reemerging zoonotic bacterial infection in the Indian subcontinent.³ The reported cases are an underestimate because of several reasons such as, lack of proper diagnostic tests, low index of clinical suspicion and lack of awareness among health-care workers⁴ There are no standard data of epidemiology and genetic diversity of rickettsiosis from India, which is essential for development of rapid diagnostics and vaccines in disease endemic

condition.⁵ The availability of rapid diagnostics like immuno-chromatography at peripheral hospitals is need of an hour, for the point of care. The sero-epidemiological studies must be conducted to collect further data.

Conclusion:

To conclude, Rickettsiosis is a re-emerging condition, and health care system needs to be aware and prepared for the same. A Sero-epidemiological survey is also recommended to understand the

epidemiology and aid in the policy making to curb these up-trending cases.

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