International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

Case Report - Rickettsial Encephelitis

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Abstract: ***Rickettsial meningoencephalitis is a relatively under - diagnosed entity, probably due to the low index of suspicion and the lack of definitive diagnostic facilities in developing countries. This case was presented to highlight the importance of clinical suspicion mainly in endemic areas, the potential severity of the disease, and the need of early initiation of therapy to prevent mortality and long term neurological morbidity.***

Keywords: Rickettsial meningoencephalitis, maculopapular rash

1. Introduction

Rickettsial infections, an emerging zoonosis are caused by obligate gram - negative intracellular organisms are divided into two main groups: the spotted fever group (SFG) and the typhus group. .

Rickettsial infection has rarely been reported to develop severe central nervous system involvement.

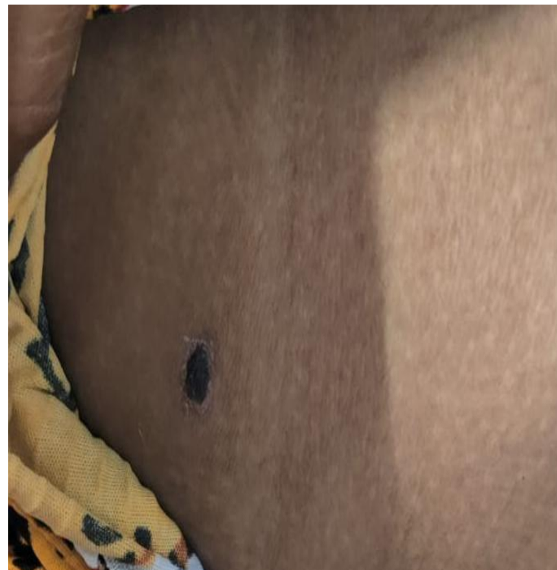
Scrub typus also known as a tsutsugamushi disease, is an acute lethal infectious disease caused by Orientia tsutsugamushi. We report a case of rickettsial encephalitis presenting with fever,, drowsiness, seizures, and a skin rash, showing ELISA IgM positivity to typhus Rickettsia group. Treatment with doxycycline resulted in dramatic clinical improvement.

2. Case Presentation

6 years old male child 1st born to non consanguineous marriage couple wills nil significant past history, development as per age, immunized as per schedule brought by parents with chief complaints of

Fever for past 6 days,
Maculo papular rash for past 4 days
Generalised body swelling for past 2 days

One episode of convulsion on day of admission
c/o Fever for past 6 days, sudden in onset, high grade, continuous, not a/w chills and rigors, no diurenal variation, relieved by taking oral paracetamol, interfebrile period child is active. On day 2 of illness erythematous maculopapular rash developed initially over trunk later progressed abdomen, face, including palms and soles. On day 4 of fever, facial puffines f/by abdominal distension and swelling of hand and feet developed. On day 6 of fever one episode of convulsion documented GTCS type lasting for 5 minute. child brought in post icteal drowsiness.



3. Clinical Course

Child was admitted in v/o acute febrile encephelitis, at time of admission child was drowsy, GCS - E3V2M5, temperature - 103degree F, HR - 168/min, RR - 48/min, CRT<2seconds, BP - 98/60mmhg.

GPE - scald present in medial left eyebrow, erythematous maculopapular rash all over body including palms and soles, eschar present in left inguinal region. b/l cervical and inguinal lymphadenopathy+. hepatomegaly of liver span 11cm + and H/o tick exposure and pets was present. no other significant history and relevant investigations sent. child was started on supportive management with O2

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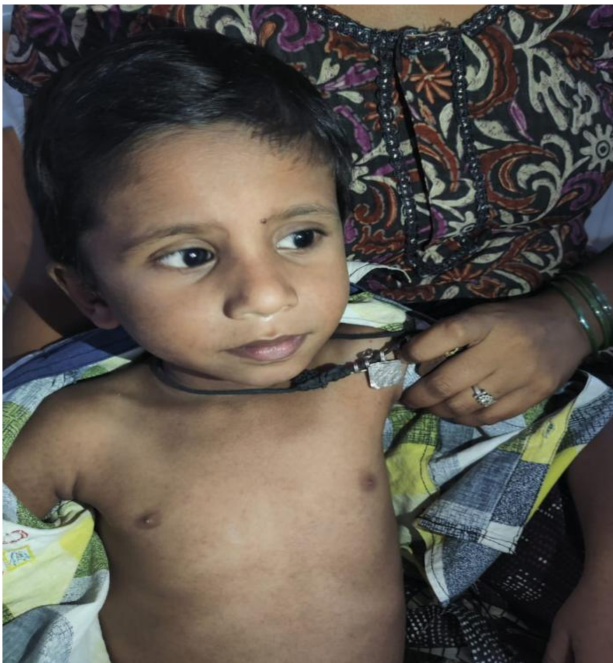
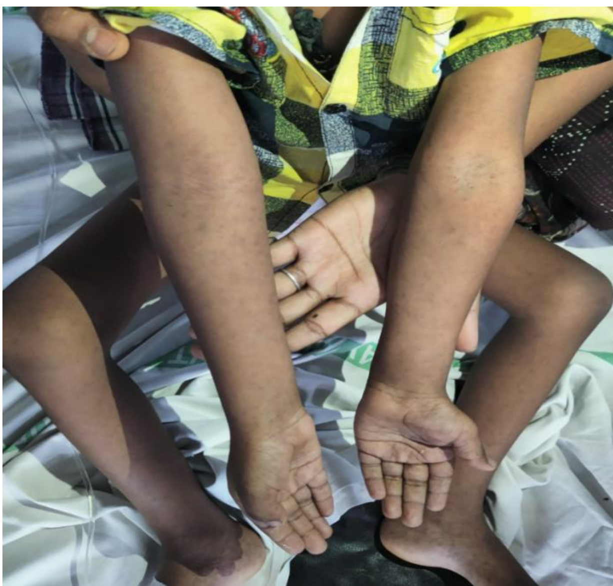
inhalation, iv fluids, inj. phenytoin, inj. paracetamol, TPR charting and monitoring vitals and u/o. in v/o RGAscore clinical 16. injection doxycycline was started, after 6 hours of admission child become conscious. investigation s/o CBC –Hb - 8g/dl, Total leucocyte count 16, 500cell/mm3 (60% neutrophils, 15% lymphocytes, and 25% monocytes), and a platelet count of 96, 000cells/mm3. serum electrolytes and calcium and LFT and RFTwere normal. LP and MRI brain normal. SCRUB TYPHUS REACTIVE BY ELISA. child become afebrile after 48hrs and convulsion free continued doxycycline for next 7 days tapered AEDS and stopped. no focal neurological deficit and child got discharged and f/up after 2 weeks child was active, and examination no focal deficits and CBC normal.





4. Discussion

Scrub typhus is an acute lethal infectious disease caused by Orientia tsutsugamushi. Scrub typhus is one of the differential diagnosis for fever with thrombocytopenia or hemorrhage

Scrub typhus can manifest with either nonspecific febrile illness or constitutional symptoms (fever, rash, myalgia, and headache), or with organ dysfunction, such as the kidney (acute kidney injury), lung (pneumonia), heart (myocarditis), liver (hepatitis), and central nervous system (meningoencephalitis). Although most patients rapidly improve with appropriate antibiotic therapy, a small percentage of cases experience serious complications.

5. Conclusion

Rickettsial meningoencephalitis is a relatively under - diagnosed entity, probably due to the low index of suspicion and the lack of definitive diagnostic facilities in developing countries. This case was presented to highlight the importance of clinical suspicion mainly in endemic areas, the potential severity of the disease, and the need of early initiation of therapy to prevent mortality and long term neurological morbidity

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