

Rare presentation of Typhus Fever with multiorgan failure and Disseminated Intravascular Coagulation

Sathiaruban S¹, Ghetheswaran S¹

¹Teaching Hospital, Jaffna.

Introduction

Typhus is the group of infectious diseases that includes epidemic typhus, endemic typhus and scrub typhus. Scrub typhus is an acute febrile illness caused by *Orientia tsutsugamushii* and transmitted by the bite of larval trombiculid mites. Epidemic typhus caused by *Rickettsia prowazekii* and spread by body lice. Endemic typhus is caused by *Rickettsia typhi*. (1)

Scrub typhus is endemic in Northern part of Sri Lanka in Jaffna peninsula. It commonly occurs in the North East Monsoon rain from September to December.

Our patient presented with typhus fever with septic shock, typhus pneumonitis, encephalitis, myocarditis and disseminated intravascular coagulation. Prompt diagnosis and timely antimicrobial therapy and intensive supportive care made the outcome good and the patient recovered completely from all the complications.

Case report

A 46 years old female found to be unconscious at home and brought by neighbours. On admission her GCS was 9. Airway was patent with normal breathing pattern. She tachycardic with low volume pulse and blood pressure is 60/40mmHg. She was febrile on admission. During resuscitation she received fluid boluses up to 1.5 litres (30ml/kg). Intravenous noradrenaline was commenced to maintain BP. On examination both lungs breath sounds were equal, vesicular breathing and there were occasional crepitations. There was an eschar on the abdominal wall.

Typhus antibody was performed and it was positive. We suspected typhus encephalitis and started on intravenous chloramphenicol 500mg 6hourly.

On day 3 of admission she developed difficulty in breathing and saturation dropped to 80% in air. She was intubated and artificial ventilation was given.

At the same time she developed increased bleeding tendency during intravenous cannulation. coagulation profile was performed and found to have increased PT, APTT, INR and low fibrinogen level (0.7g/l). Blood picture was performed and it revealed disseminated intravascular coagulation. D-dimer was more than 80mg/l. 12units FFP, 6units cryo, 10units platelets and 1 pint blood transfusion were given during two weeks hospital stay.

At the same time 2D echo was performed and it suggested global hypokinesia and Troponin I was positive. She was discharge on day 18 with normal coagulation profile and 2DEcho.

Discussion

Typhus fever has been described since 1528AD which can present with multi organ dysfunction. (4) Typhus presents with fever, headache, rash, myalgia, lymphadenopathy and eschar. Nearly all patients presented with fever and 60percentage presented with eschar.(2)

The name typhus comes from the greek tuphos meaning hazy, describing the state of mind of those infected. Investigations typically show mild leukocytosis, thrombocytopenia, low albumin and haematocrit. In mild diseases without other organ dysfunction Doxycycline is the drug of choice.(3) Intravenous benzyl penicillin is also effective but in typhus encephalitis intravenous chloramphenicol is the drug of choice.

Acute respiratory distress syndrome [ARDS], disseminated intravascular coagulation [DIC] and type two respiratory failure are fatal conditions and need intensive care unit management. Most of the patients who presented with DIC, the outcome was poor. (5)

Corresponding Author: Dr S Sathiaruban. Email: sathiaruban84@yahoo.com  <https://orcid.org/0000-0003-2046-4649>



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A case of scrub typhus complicated by severe DIC was published in the year of 2012 by Fukushima medical university, Japan described an autopsied case of scrub typhus complicated with severe DIC. The autopsy revealed systemic vasculitis and perivasculitis. (5)

The serious complications of typhus were studied at the year of 1998 in Taiwan at Taipei National Defense Medical centre from August 1993 to July 1997 revealed that 36 percentage of them presented with pneumonitis, 15 percentage with ARDS. (8)

Our patient presented with septic shock, low GCS and dehydration. Eventhough our patient has a complicated course of illness she recovered fully with time diagnosis with ICU and supportive care.

References

1. Thap LC,etal.southeast asian journal of tropical medicine[2002];septic shock secondary to scrub typhus;characteristics and complications.public health,33,780-86
2. Kim,D.M.,Won,K.J.,park,C.Y.,et al[2007] ;Distribution of eschars on the body of scrub typhus patients;a prospective study.Am.J.Trop. Med.Hyg.,76,806-809
3. Kim Y.S.,Yun,H.J.,et al [2004];a comperative trial of a single dose of azithromycine versus doxycycline for the treatment of mild scrub typhus.clin.infect.dis,39,1329-1335
4. Cracco et al.[2000];multiple organ failure complicating probable scrub typhus.clin.infect. dis.,31,191-192
5. Ono Y ,et al.emergency medicine Australasia; 2012 october;24[5];577-80.[pubmed]
6. Ben R.J,Feng NH,Ku CS et al;meningoen-cephalitis,myocarditis and disseminated intravascular coagulation in a patient with scrub typhus;Journal of MICROBIOLOGY immunology and infection[1 march 1999,32[1];57-62.[pub med]
7. Kuroda T,et al;1991 Nov;scrub typhus with DIC,meningitis and pulmonary fibrosis;Nihon Naika Gakkai Zasshi;1991 Nov 10;80[11];1816-7.
8. Tsay RW,et al.J microbial immunol infection [1998];serious complications in scrub typhus. [pub med]