Unusual presentations of Scrub Typhus

Dr. R. Nithiyanantham
MD (Post graduate)
Department of Paediatrics
ESI – PGIMSR, KK Nagar, Chennai
Case 1

9 year old girl presented with

- High grade, intermittent fever – 8 days duration
- Papular lesion in the right groin – 3 days before onset of fever
Examination

- Febrile, sick looking
- Tender axillary lymph nodes
- ‘Ulcer’ right groin
- HR: 110/min, RR: 28/min, BP: 90/60mmHg
- Anthropometry- Normal
- CVS: Normal
- Respiratory system: Normal
- Abdomen: Liver enlarged 3 cm below the right costal margin, spleen tip palpable
- CNS: Clinically normal
Investigations

- Counts: Normal
- Platelet count: 1.38 lakh/mm³
- hs CRP: 57.44 mg/dl
- ESR: 42 mm/hr
- Smear for MP: Negative
- Blood & urine culture: Sterile
- Widal: Not suggestive of enteric fever
- Dengue serology: Negative
D2 of hospitalisation: Air entry was reduced over left infra axillary, infra scapular and mammary areas

X ray chest: Left mid zone, lower zone consolidation; nodular lesions right lower zone, no mediastinal shift

USG Chest: No effusion; consolidation of left lingular and lower lobe
Course in hospital

- No tachypnoea/ retractions/ hypoxia/ bronchial breath sounds noted
- Moderate to high grade fever persisted
- Doxycycline started in view of fever with eschar
- Fever subsided within 24 hours of start of Doxycycline
- IgM ELISA for scrub typhus: Positive (OD - 7.105)
- Weil Felix test: Titre > 1 in 160 (OX K)
Case 2

12 year old boy presented with

- High grade, intermittent fever – 4 days duration
- Pain over left inguinal region – 3 days
- Loose stools and vomiting – 2 days
• History of hospitalization 2 weeks prior – Abscess over left knee, incised and drained; treated with antibiotics

• Asymptomatic for three days following which fever recurred
Examination

- Febrile, toxic
- Significant, tender lymphadenopathy especially left inguinal
- Abdomen: Diffuse tenderness with hepatosplenomegaly
- Other systems: Normal
- Local examination left knee – Infra patellar fullness
Possible differential diagnoses

- Partially resolved pyogenic infection
- Enteric fever
Investigations

- Counts: Normal
- Platelet count: 145 lakh, 107 lakh, 121 lakh (serially)
- Smear for MP/ microfilaria: Negative
- ESR: 46 mm/hr
- hs CRP: 187 mg/dl
- Dengue, leptospira serology: Negative
- Widal: Not suggestive of enteric fever
- Blood & urine culture: Sterile
Course in hospital

- Despite adequate antibiotics, started for partially resolved abscess and subsequently for enteric fever, child continued to have high grade fever

- On day 4 of hospitalisation – developed bilateral epididymo-orchitis

- Trial of anti filarial medication also did not result in clinical improvement
Possible scrub typhus?

- Unremitting fever
- Hepatosplenomegaly
- Tender lymphadenopathy
- Thrombocytopenia

- Despite absence of eschar, child was started on Doxycycline
• Dramatic response noted with in 24 hours

• IgM ELISA for scrub typhus: Positive (OD 2.25)
Discussion – Scrub typhus

- Caused by *Orientia tsutsugamushi*
- Transmitted from rodents to humans by bite of trombiculid mite
- Incubation period 6-21 days
- Classic skin manifestation – ‘eschar’
Common presentation

- Fever
- Gastrointestinal symptoms – diarrhoea, vomiting, abdominal pain
- Regional/ generalised lymphadenopathy
- Maculopapular rash
- Eschar
- Hepatosplenomegaly
- Thrombocytopenia
Uncommon presentations

- Pneumonia – massive consolidation is very rare
- Meningoencephalitis
- Myocarditis
- Acute renal failure
- ARDS
- Septic shock
- MODS
- Epididymo – orchitis is very rare
Skin manifestations

- Morphology variable – papule, vesicle, shallow ulcer to classic black eschar
- Usually not itchy or painful
- Most eschars are seen on the legs
- Necrotic eschar not seen in moist areas; ulcer with shallow, purulent base typically seen in the groin and axilla

Pleuropulmonary manifestations

- In 59 to 72% cases, X ray abnormalities can be seen
- Commonest finding is an interstitial pneumonia
- Other manifestations – pulmonary oedema, haemorrhage, pleural effusion and pneumonia
- Can be symptomatic or asymptomatic
- Symptomatic can be fatal i.e. due to ARDS

Scrub Typhus: Clinical, Pathologic, and Imaging Findings. Yeon Joo Jeong, Suk Kim, Yeh Dae Wook, Jun Woo Lee et al; RadioGraphics 2007; 27: 161-172
Genital manifestations

- Epididymo-orchitis is a very rare manifestation
- No mention of this in standard textbooks
- One case report from Mysore in a 7 year old boy

Epididymo - Orchitis: An Unusual Manifestation of Scrub Typhus. C. Chandrashekhar, Suryaprakash Hedda, Santosh Kumar; Indian J Pediatr. Published online 7th February 2013
Key learning points

- Suspect scrub typhus in any pyrexial child with lymphadenopathy and hepatosplenomegaly +/- thrombocytopenia and eschar

- Meticulous search for eschar (scrotum, scalp, ear and nose too!)

- Classical eschar may not be seen in moist areas

- Absence of eschar does not rule out scrub typhus