QUESTION 58 Infectious Diseases

A 28-year-old woman becomes unwell the day after returning from a month-long holiday in Thailand. She complains of a fever with severe headache, myalgia and sore eyes. On the fourth day her temperature settles but two days later recurs and she then develops a generalised rash.

On examination she is pyrexial with a temperature of 37.9°C. Pulse is 80/minute, and blood pressure 120/80 mmHg. There is a diffuse macular rash over the chest and abdomen. The rest of the examination is normal. Blood tests show a normal haemoglobin, normal leukocyte count, and normal platelets. Blood film examinations for malaria parasites are negative on three occasions.

Which one of the following is the most likely diagnosis?
A. Scrub typhus.
B. Typhoid.
C. Acute schistosomiasis.
D. Dengue.
E. Leptospirosis.

Scrub typhus

Organism: mite borne infectious disease - Orientia tsutsugamushi (described by Chinese in 3rd century)
Gram-ve coccobacillus
Antigenically distinct from the typhus group rickettsiae

Vectors: larval trombiculid mites of genus Leptotrombidium
Larval mites (also known as chiggers)

Incubation period: up to 2 weeks

Disease occurs 7 - 10 days after the bite of an infected chigger

Epidemiology
Asia Pacific rim (Korea, China, Taiwan, Japan, India, Thailand, Malaysia, Queensland, Australia)
Study described presence of scrub typhus in remote rain forest region of NT of Australia

Clinical manifestations
High fever
Intense generalized headache
Diffuse myalgias

Rash, eschar and other signs and symptoms are also present

Diagnosis
No laboratory test diagnostically reliable in early phases of scrub typhus

Blood abnormalities
1) Severe illness - develop thrombocytopenia
2) Elevations in heaptic enzymes, bilirubin and Cr
3) Leukopenia or leukocytosis can occus but most have normal WBC

Confirmation of O.tsutsugamushi infection
1) Serology
   - indirect fluorescent antibodu (IFA) test
2) Biopsy of an eschar or generalized rash
   - pathological hallmark of scrub typhus is a lymphohistiocytic vasculitis
3) Culture
   - only available in a few centres'
4) PCR
   - even in early course of infection
Year 2005 Paper two: Questions supplied by Ilynn

- sensitive and specific assay

**Treatment**
1) Doxycycline

Refer back to Q 87 for the explanation of the other diseases

**Back to the Question:**

Important features:
Thailand
Waxing and waning fevers- characteristic of Dengue fever.
Incubation period is less than 2 weeks
Develops a macular rash

Again, they ask for the most likely diagnosis. Therefore the answer is D. Dengue Fever