

# ***Scrub Typhus***

**Public Health Division, Directorate of Health  
Services**

**Thiruvananthapuram**

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# Symptomatology

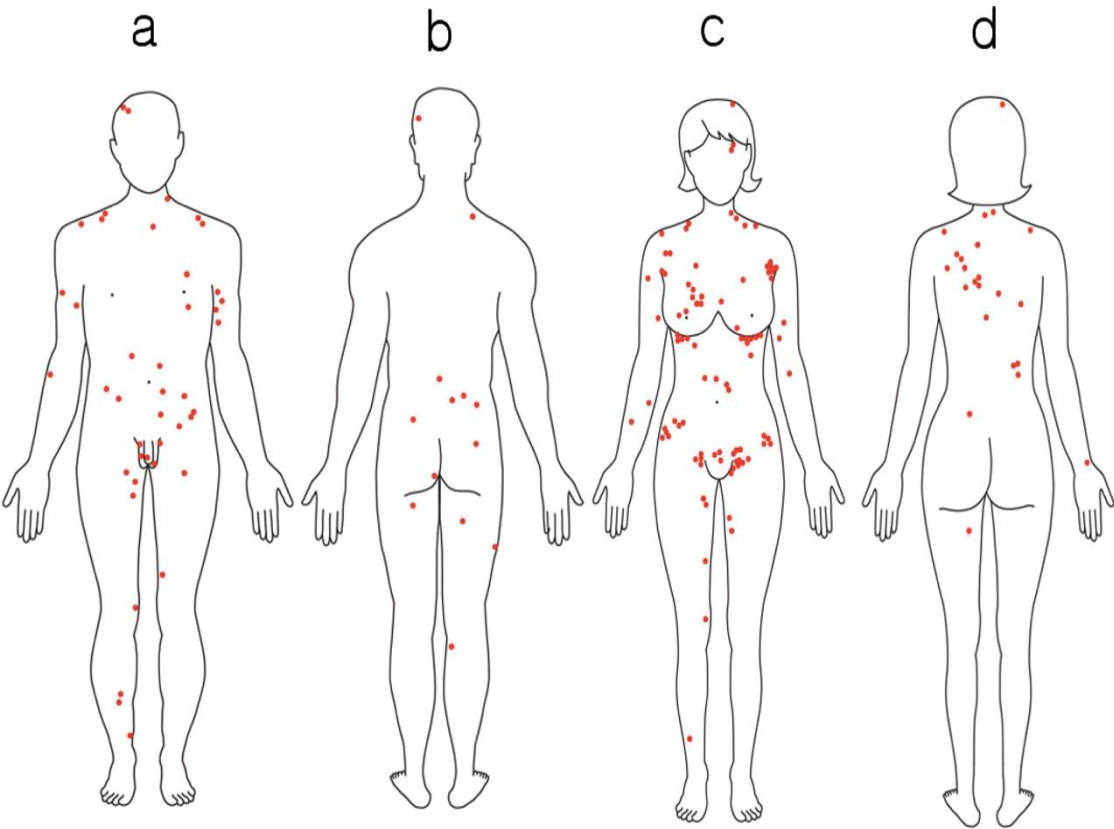
- High grade fever, chills & rigor.
- Severe myalgia and body ache.
- Intense headache .
- Throat pain and dry cough .
- Chest pain and breathlessness.
- Generally upper respiratory symptoms are not a feature of scrub typhus.
- **Clinical findings:**
  - *Conjunctival congestion.*
  - *Maculopapular rash.*
  - *Regional lymphadenopathy .*
  - *Spleen enlargement.*
  - *Eschar*

# High index of suspicion scrub typhus when---

- Fever WITHOUT upper resp symptoms , usually
- Febrile illness lasting more than 1 week
- Failure of a Febrile illness to respond to conventional antibiotics

# Eschar

- Starts as an enlarging papule at the site of chigger bite
- Often in the concealed , moist areas of the body like axilla/inguinal region /under the breasts
- Later develops in to the **classical eschar**
  - *Not usually larger than 1cm in diameter.*
  - *Central necrotic black scab,*
  - *surrounded by a raised ring*
  - *surrounding erythema.*
  - *usually not itchy or painful.*
  - *Eschar is seen in as many as 50% of patients.*



# Complications

- Pneumonitis,
- Myocarditis
- Encephalitis

# INVESTIGATIONS

- **Blood Routine examination**
  - Leucopenia.
  - **Relative lymphocytosis.**
  - Thrombocytopenia.
- **Liver function tests:**
  - Serum bilirubin -- mild elevation.
  - SGOT and SGPT -- moderately elevated.
  - Alkaline phosphatase may be increased.
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- **Renal function tests:**
  - Usually normal unless the patient develops a pre-renal or renal failure.
  - Serial RFT values are to be done for early diagnosis.

# Specific diagnostic tests

- **Scrub antibody test:**
  - IgM Elisa is the specific test.
  - A single high titer of Ig M antibodies with classical clinical features is considered as a probable case.
  - Fourfold increase in Ig M antibodies is confirmatory
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- **Weil Felix Reaction:**
  - Positive result is only obtained late in the course of illness. It is not a very sensitive test. False positives and false negatives are common and hence not reliable.



# Tests for detecting complications

- **ECG** : To rule out **myocarditis**
  - (Tachycardia and diffuse ST,T wave changes)
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- **Chest X-Ray** : To rule out **pneumonitis**.
  - (Non-homogenous patchy opacities without air bronchogram.)
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- **EEG and MRI**: To diagnose **encephalitis**

# TREATMENT

- **General measures:**
- ***Antipyretics:***
- Paracetamol – 500-650mg 6hrly and SOS
- *Avoid NSAIDs to prevent renal injury*
- Tepid sponging to lower the temperature
- Adequate fluid intake

# TREATMENT--Antibiotics

- **Early initiation of treatment is very important.**
  - **person from known endemic area, + high grade fever and chills**
  - **start treatment early even in the absence of localizing infection and eschar.**
- **-Cap Doxycycline:**
- 100mg BD x 5-7 days
- OR
- **-Tab Azithromycin:**
- 500mg OD x 5-7 days.
- [Azithromycin 10 mg/kg/day, OD for children]
- Azithromycin is generally the preferred drug for children <8 years and pregnant women.
- [Absence of response to doxycycline is an indication for investigating for other causes]

# PREVENTION

- Protective clothing and use of insect repellents.
- **Chemoprophylaxis**
- Only in special circumstances.
- **Cap Doxycycline**
- 100mg once weekly after food for 6 weeks after exposure.

# Contacts and Clarifications

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- For all queries about phone numbers, email etc of concerned officials of Health Services like DMO, District Surveillance Officer (DSO) District Programme Manager (DPM), RCH Officer (RCHO) of your district, State Officials, institutions, specialists, etc, please call
  - 24 x 7 NHM Health Services helpline **DISHA** on
  - **0471-2552056** ( Normal call, any line)
  - **1056** (toll free from BSNL Lines)