Department of Health and Family Welfare

GOVERNMENT of KERALA

TREATMENT GUIDELINES - SCRUB TYPHUS

ETIOLOGY

Infecting Organism

Orientia tsutsugamushi

Transmitted by: Chigger mite (bite often unidentified and painless)

Incubation period: 6-20 days.

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.

Diagnostic Findings

Eschar:

It starts as an enlarging papule at the site of chigger bite, often in the concealed and moist areas of the body like axilla, inguinal region and under the breasts in case of women. Later develops in to the classical eschar which is not usually larger than 1cm in diameter. It has a central necrotic black scab, surrounded by a raised ring and surrounding erythema. It is usually not itchy or painful. Eschar is seen in as many as 50% of patients.

Complications

Common complications:

Pneumonitis, Myocarditis & Encephalitis.

Uncommon complications:

Shock, Acute renal failure &
Disseminated intravascular coagulation (DIC)

INVESTIGATIONS

Blood Routine Examination

" Leucopenia.
" Relative lymphocytosis.
" Thrombocytopenia.

Blood Chemistry

Liver function tests:
Serum bilirubin -- mild elevation.
SGOT and SGPT -- moderately elevated.
Alkaline phosphatase may be increased.

Renal function tests:
These are usually normal unless the patient develops a pre-renal or renal failure. Serial RFT values are to be done for early diagnosis.

Special Diagnostic Tests

Weil Felix Reaction:

Positive result is 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.

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

Tests for detecting complications

ECG: To rule out myocarditis
(Tachycardia and diffuse ST, T wave changes are suggestive of myocarditis)
Chest X-Ray: To rule out pneumonitis.
(Non-homogenous patchy opacities without air bronchogram.)
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

Antibiotic treatment

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.
Early initiation of treatment is very important.
In a person from known endemic area, presenting with high grade fever and chills, start treatment early even in the absence of localizing infection and eschar.
[Absence of response to doxycycline is an indication for investigating for other causes]
Cap. Rifampicin in a dose of 450 mg BD x 5-7 days can be used in resistant cases in endemic areas.

Secondary Bacterial Infections:-

Appropriate antibiotics are to be used.

Prevention

Protective clothing and use of insect repellents.

Chemoprophylaxis

Only in special circumstances
Cap Doxycycline
Dose: 100mg once weekly after food for 6 weeks after exposure