Department of Health and Family Welfare
GOVERNMENT of KERALA
TREATMENT GUIDELINES - LEPTOSPIROSI

ETIOLOGY

Spirochete- *Leptospira interrogans*

**Symptomatology**
- Fever, body ache and head ache.
- May have dry cough, sore throat, diarrhea and dysuria.
- Later jaundice, oliguria, bleeding tendency, respiratory distress, cardiac failure, convulsions and coma.

**Clinical findings**
- Fever, muscle tenderness especially calf and thigh, low backache, congestion of eyes, later may have sub conjunctival haemorrhage, Jaundice and evidence of hepatic, pulmonary and renal involvement.

**Complications**
- Can occur by the end of 1st week.
- Bleeding tendency, Thrombocytopenia and Liver failure, Renal failure.
- Acute respiratory distress
- Hypotension, Myocarditis, Pancreatitis, Convulsions and Coma.

**Red Flag signs**
- No response to antibiotics in 8 hrs
- Resp: rate >30/min, Urine output< 20 ml/Hr
- BP<90mm systolic
- Tachycardia out of proportion to fever
- Flapping tremor, Altered sensorium

INVESTIGATIONS

**Early (1st 3 days)**
- Blood- TC, DC--Neutrophilic leukocytosis.

**After 3 days**
- Mild to moderate thrombocytopenia.
- Increased Serum Bilirubin with disproportionately low** elevation (Usually <500 IU/L) of ALT (SGPT) & AST (SGOT).
- Increased Blood Urea & Serum creatinine,
- Increased CPK,
- Increased Serum Amylase.
- Chest Xray
- Non homogenous patchy opacities if ARDS develops.

**ECG**
- Tachycardia disproportionate to fever, with nonspecific ST-T changes.

**Regular monitoring**
- RFT, Repeat X-Ray Chest

**Specific treatment**
- Cap Doxycycline 100 mg bd x 7 days (preferred)
- Cap Amoxycillin 500 mg q8h x 1 week.
- For children
  - If over 8 years, -- Cap Doxy 5 mg /Kg/day, divided 12 hourly, x 7 days
  - If below 8 years, -- Tab. Amoxycillin 50 mg/Kg/day, divided 8th hourly x 7 days
- Or Azithromycin 10 mg/Kg/day,OD x 3 days

**Toxic patients with Red flag signs, late consultations and organ dysfunction**
- Need IP admission & parenteral antibiotics as follows-
  - Inj CP 15 L 6Hrly x 7 days or Ceftriaxone 1-2 gm
  - 12 hourly x 7 days.
  - (Ciprofloxacin & Macrolides are alternatives)

**For children**
- Inj CP 2-3 L/Kg/day, divided 6 hourly x 7 days.
- Inj.Ceftriaxone 50 mg/Kg, divided 12 hourly x 7 days.

**Special Precautions**
- Monitor Fluid intake-output chart for adequate hydration.
- Monitor for Red Flag signs
- Avoid NSAID

PREVENTION

**Chemo prophylaxis**
- Cap. Doxycycline 200 mg once a week to those who are engaged in high risk jobs like working in contact with stagnant water, canal cleaning etc.

**Personal protection**
- Gloves, boots, waterproof dressings for injuries, local applications like neem oil and turmeric before engaging in high risk jobs
- Animal housing to be kept away from human dwellings.