

# FEVER CLINICS

All about acute undifferentiated febrile diseases

## Case profile\*

### Patient demographics

Name: Mr XYZ

Age: 30

**Reason for admission:** Fever, headache and myalgia for 5 days

**Past history:** Volunteered in the recent flood affected area (3 weeks ago)

**Past medication and medical history:** Nil

### Physical examination:

- Pale conjunctiva with suffusion
- Icteric sclera
- Tenderness of abdomen and lower extremities
- Bilateral leg edema
- Petechiae over both wrists

### Laboratory investigations:

- Elevated blood urea nitrogen (72 mg/dL)

- Elevated creatinine (6.8 mg/dL)
- Elevated transaminase levels (AST: 1172 IU/L, ALT: 80 IU/L)
- Elevated total bilirubin (7.60 mg/dL)

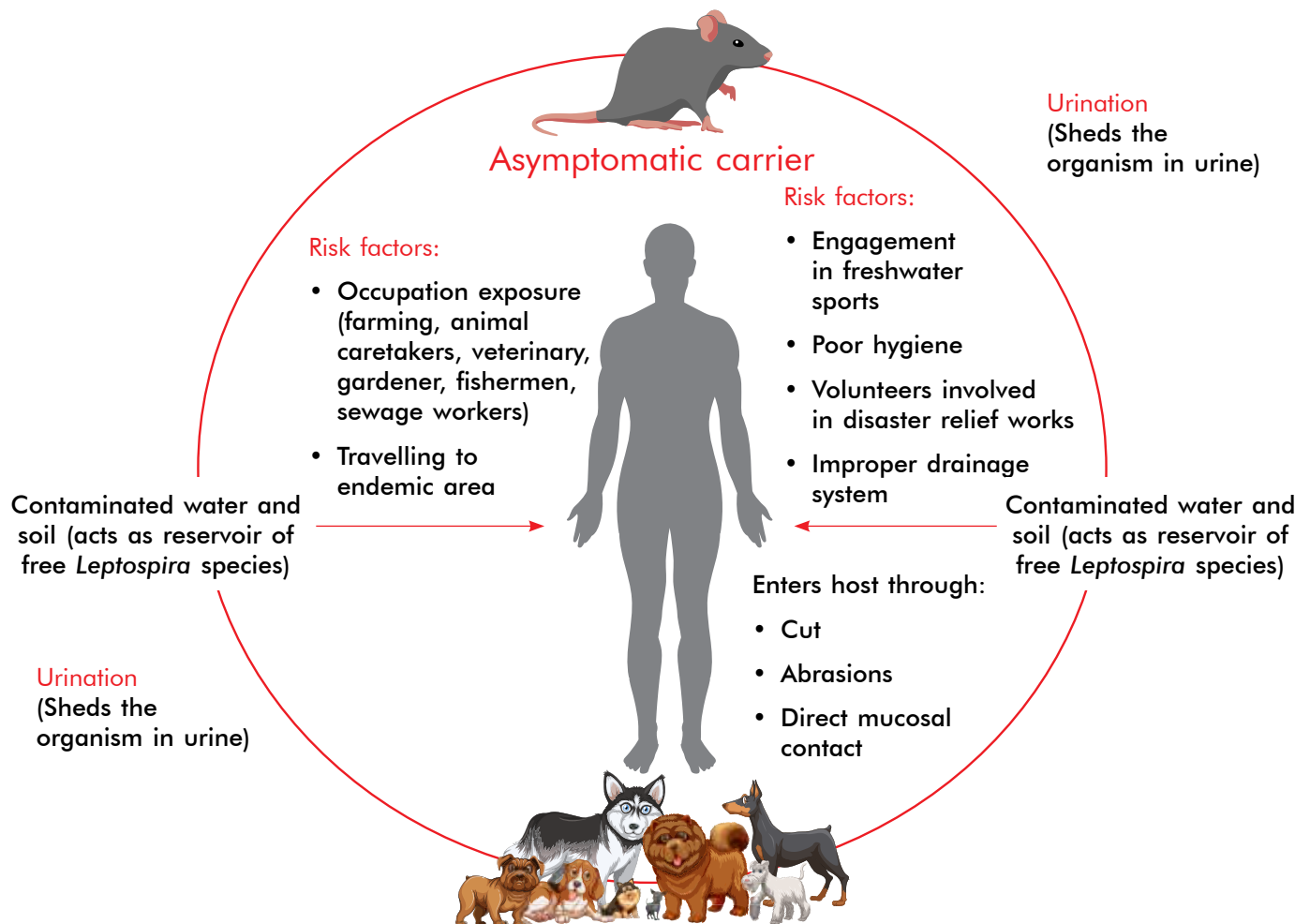
### Sonogram findings:

- Bilateral pleural effusion
- Slight splenomegaly

**Provisional diagnosis:** LEPTOSPIROSIS

ALT: Alanine transaminase; AST: Aspartate transaminase. \*Denotes a fictitious case

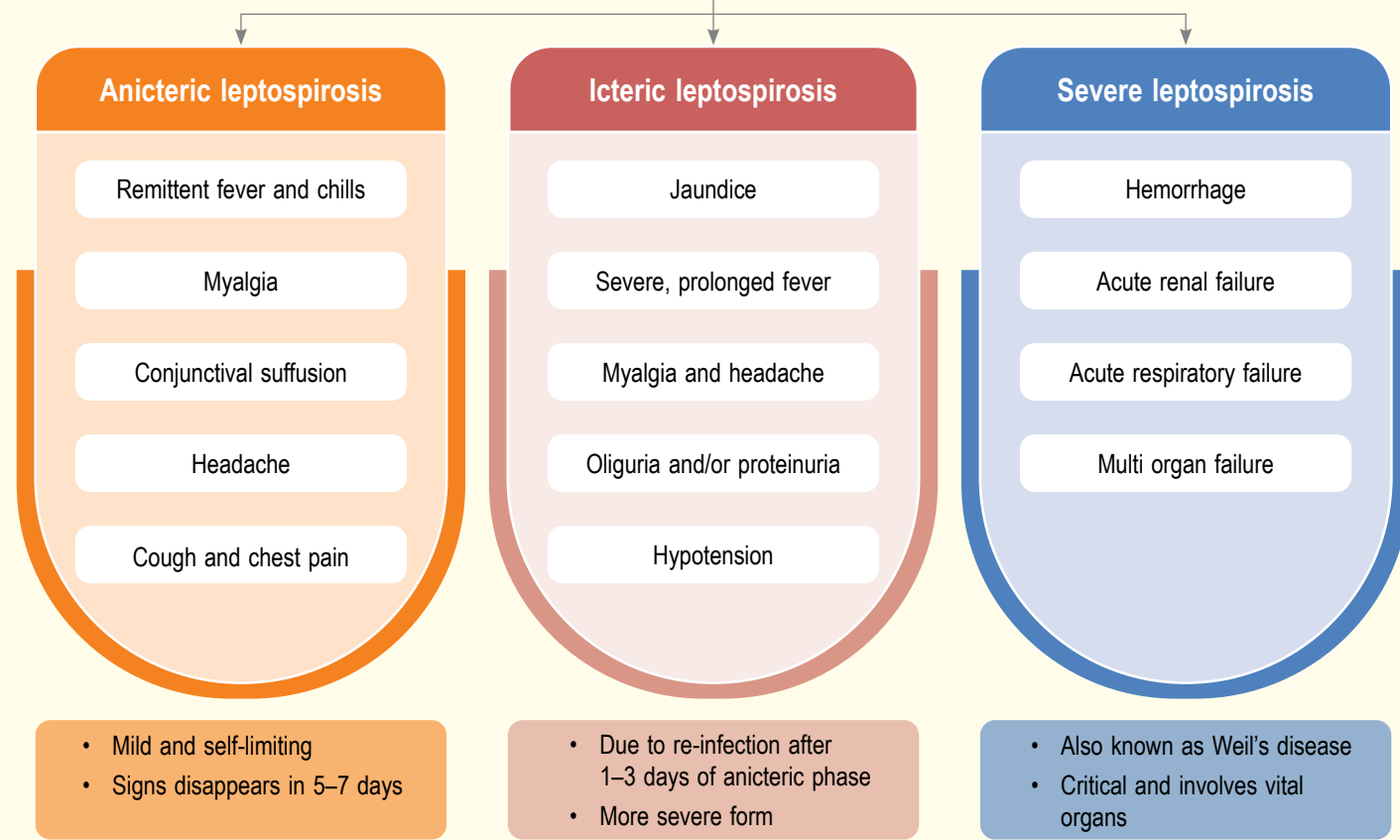
## Leptospirosis: Diagnosis and management



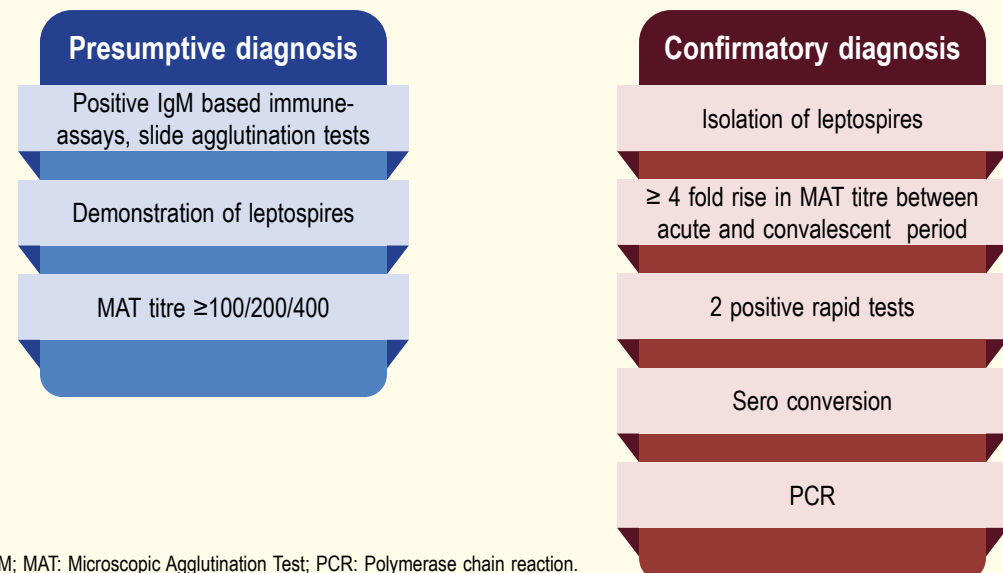
- Leptospirosis is a zoonotic, waterborne infectious disease caused by *Leptospira* species<sup>1,2</sup>
- Vectors: Rodents, dogs, live stocks, wild animals<sup>1,2</sup>

## Clinical manifestations:<sup>1,3</sup>

Types of leptospirosis and clinical presentations



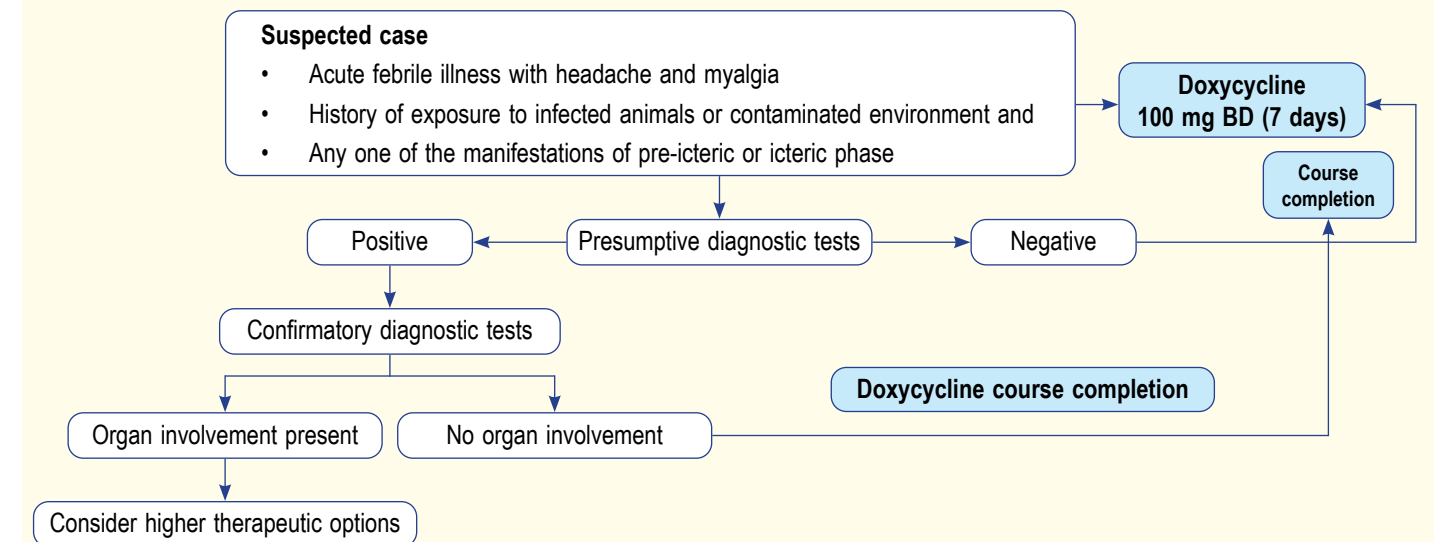
## Diagnostic criteria<sup>1,3</sup>



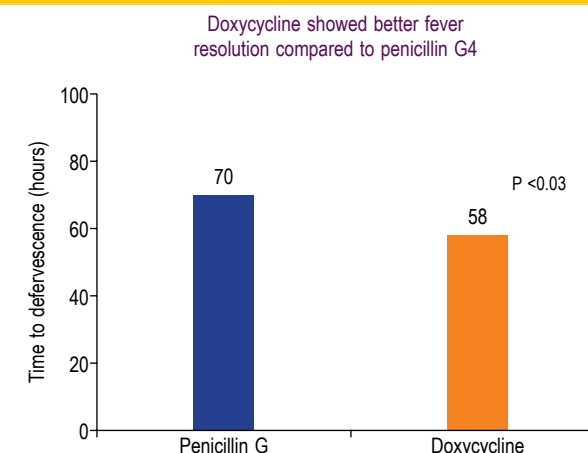
Ig M: Immunoglobulin M; MAT: Microscopic Agglutination Test; PCR: Polymerase chain reaction.

**WHO reported leptospirosis as a major globally emerging and re-emerging disease<sup>2</sup>**

## Therapeutic management: Role of doxycycline<sup>1,3</sup>



## Doxycycline was more effective in fever resolution, compared to penicillin G<sup>4</sup>



- Doxycycline is the preferable therapy for patients with negative serologic diagnostic test at admission<sup>4</sup>
- Doxycycline combination therapy (with cefotaxime) is the most preferred treatment for severely ill patients for whom the diagnosis would be in doubt<sup>4</sup>

## Clinical pearls

- Leptospirosis is one of the major re-emerging infectious diseases
- Doxycycline is the main stay antibiotic in the management of leptospirosis
- Doxycycline is associated with better fever resolution compared to penicillin G
- Doxycycline is the preferred choice as empirical therapy in severely ill patients

## References:

1. Sun A-H, et al. Biomedical Journal. 2020;43(1):24–31.
2. Karpagam KB, et al. Eur J Clin Microbiol Infect Dis. 2020. Doi: 10.1007/s10096-019-03797-4.
3. National guidelines: Diagnosis, case management prevention and control of leptospirosis. National centre for disease control. Available from: <https://ncdc.gov.in/WriteReadData/1892s/File558.pdf>. Last accessed on 10 April, 2020.
4. Suputtamongkol Y, et al. Clinical Infectious Diseases. 2004.15;39(10):1417–24.

Rx

# DOXT-SL<sup>TM</sup>

Doxycycline hyclate 100 mg (as immediate release pellets), Lactic acid bacillus 5 billion spores (as enteric coated pellets) capsule



*The one to trust*

**Introducing Soon**

# DOXT<sup>TM</sup> Injection

Doxycycline hyclate 100 mg

**Dr.Reddy's**

**Dr. Reddy's Laboratories Ltd.,** Global Generics India, 7-1-27,  
Ameerpet, Hyderabad - 500 016, India. [www.drreddys.com](http://www.drreddys.com)

Abbreviated Prescribing Information (API)

**Composition:** Each capsule contains Doxycycline 100mg + Lactic acid bacillus spores-5 billion. **Therapeutic Indications:** For adult patients prone to intra-abdominal bacterial infection & antibiotic associated diarrhoea. **Dosage and Administration:** In Adults for the treatment of acute infections is two capsules per day (as a single dose or in divided doses) followed by a maintenance dose of one capsule/day. In the management of more severe infections, two capsules daily should be given throughout treatment. **Contraindications:** Doxycycline is contraindicated when hypersensitivity to any of the Tetracycline's. **Drug interactions:** Anticoagulant, co-administration of Tetracyclines with penicillin, Antacid, OC pills, Antiepileptic's etc. **Warnings & Precautions:** During tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). Evaluate for Clostridium difficile-associated diarrhoea. Limit sun exposure. Overgrowth of non-susceptible organisms, including fungi & superinfection. Dosage adjustment required in patients with hepatic impairment. **Adverse reactions:** In patients receiving tetracyclines include anorexia, nausea, vomiting, diarrhoea, rash, photosensitivity, urticaria, and hemolytic anemia. **Special population:** Can be prescribed in the elderly in the usual dosages. Not recommended for use in paediatric population due to complexity of dose calculations with a combined dosage form. Pregnancy Category D. Tetracyclines are excreted in human milk; Doxycycline use during nursing should be avoided if possible.

Further information available upon request.

Date: March 20, 2020

**Composition:** Combi-pack contains (A) Vial of Doxycycline for injection USP 100mg (B) Ampoule of Sterile water for Injection IP 10ml. **Therapeutic Indications:** Broad spectrum antibiotic for infection by Rickettsia, sexually transmitted disease, Respiratory tract infection, specific bacterial infections etc. **Dosage and Administration:** In Adults usual dosage is 200 mg on first day in one or two infusions, subsequently as per disease severity 100/200 mg daily. In Syphilis dosage can be 300 mg daily for 10 days. Infusion should be for 1-4 hours. In Paediatric patients weighing > 45kg adult dose can be used. In paediatric patients weighing < 45kg and greater than 8 years of age dose of 2.2mg/kg of body weight can be administered every 12 hours. **Contraindications:** Doxycycline is contraindicated when hypersensitivity to any of the Tetracycline's. **Drug interactions:** Anticoagulant, co-administration of Tetracyclines with penicillin, Antacid, OC pills, Antiepileptic's etc. **Warnings & Precautions:** during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). Evaluate for Clostridium difficile-associated diarrhoea. Limit sun exposure. Overgrowth of non-susceptible organisms, including fungi & superinfection. **Adverse reactions:** In patients receiving tetracyclines include anorexia, nausea, vomiting, diarrhoea, rash, photosensitivity, urticaria, and hemolytic anemia. **Special population:** Pregnancy Category D. Tetracyclines are excreted in human milk. Doxycycline use during nursing should be avoided if possible.

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