

## **Leptospirosis**

- Leptospirosis, worldwide Zoonoses, has been gaining importance in the recent times as an emerging disease in both livestock and human beings.
- It assumes great public health significance as dogs, rodents, domestic & wild animals act as reservoirs of human infection.
- The disease is transmitted by either direct or indirect contact of water contaminated with urine of reservoir/carrier animals.
- The incidence of leptospirosis is high during rainy season due to water logging conditions and contamination of environment with urine of carrier animals
- In domestic animals, though it can produce pyrexia, jaundice and nephritis, very often reproductive failures are seen.
- In man, the disease occurs as febrile illness (anicteric type) or hepatorenal failure (Icteric type) or meningitis

### **Clinical signs**

#### **Human:**

- Abrupt onset
- Severe headache
- High fever (41 °C) - Spiking or persistent
- Severe Body pain
- Conjunctival suffusion (red eyes)
- Sore throat
- Abdominal pain
- Albuminuria & Jaundice
- Skin rashes
- Superficial lymph node enlargement
- Multi – organ failure
- Acute pulmonary haemorrhagic syndrome in some parts of India

#### **Animal**

- Loss of condition
- Loss of production – reduced milk yield, Mastitis
- Infertility, Abortion
- Hepato-renal syndrome, Jaundice
- Acute pulmonary haemorrhagic syndrome

## **Diagnosis of Leptospirosis in man & animals:**

The disease can be diagnosed by:-

1. Detection of *Leptospira* in blood / urine / CSF/ tissues, milk (DFM)
2. Isolation by cultural / biological methods.
3. Detection of Leptospiral antibodies by serological tests (MAT\*, ELISA)
4. Detection of Nucleic acids (PCR)

\*WHO recommended Microscopic agglutination Test (MAT) which is being routinely carried out by using 12 *Leptospiral* reference strains.

## **Prevention and Control**

### **Human Leptospirosis:**

- Drinking boiled and cooled water
- Washing hands and feet with soap and water
- Avoiding sewage contaminated water-logged areas
- Use of proper footwear/gum boots
- Rodent control
- Vaccinating dogs
- Prophylactic treatment on the advice of your physician

### **Animals Leptospirosis -control**

- Involves a combination of farmer's awareness, surveillance, disinfection, biosecurity, chemotherapy, vaccination and culling
- Leptospirosis can be controlled risk avoidance, hygiene, vaccines & chemotherapy
- Early robust antibiotic treatment is the essence of *Leptospira* chemotherapy. Antibiotics like Penicillin, Doxycycline, Oxytetracycline & streptomycin are used, with supportive treatment in pet animals. Strictly avoid self-medication
- Rodent and stray dog control