

Leptospirosis

Leptospirosis is a zoonosis that is widespread worldwide. It is a zoonosis because it is a disease of wild and domestic animals that excrete the causative agent in the urine. Humans become infected through direct or indirect contact with an infected animal or its excreta.

The disease is widespread worldwide, except in the polar regions. In Slovenia, leptospirosis is endemic in Pomurje, where three-quarters of all reported cases originate. In other parts of Slovenia, the disease is relatively rare. *Leptospira* infections in humans occur throughout the year.

The cause

The causative agent is a spirochete of the genus *Leptospira*.

Transmission

The main reservoir of infection is rodents, especially rats and field mice, and many other animals, including dogs and cattle. *Leptospira* live for a relatively long time in water and soil. Water contaminated with the urine of infected rats is important for the transmission of infection.

Incubation and course of the disease

The average incubation period is 10 days (4 to 19 days). The patient can excrete *Leptospira* in the urine (usually 1 month).

The disease occurs in two stages. The initial signs of illness are uncharacteristic, flu-like: a rapid rise in body temperature, often with chills, severe headache, muscle aches. Abdominal pain, nausea, vomiting, enlargement of the liver and, less commonly, lymph node enlargement and rash may also be present. A characteristic sign, which is sometimes not pronounced, is conjunctivitis. The fever returns to normal after 1 week, which in a minority of patients means the end of the disease. In most patients, however, the temperature rises again. Meningitis and renal impairment often occur during this time. Death is usually due to renal failure, liver failure, pneumonia.

Susceptibility

Leptospirosis is an occupational disease of people who work with livestock, animals, animal products or on contaminated soil and water. It also affects people who bathe in contaminated water, lakes, canals and rivers.

Treatment

Leptospirosis is treated with antibiotics. Treatment lasts 5 to 7 days. Fluid and mineral replacement and monitoring of lung, kidney and liver function are very important.

Prevention

Preventing leptospirosis in humans is very difficult because it is not possible to eradicate a large animal reservoir of infection. Hygienic management of slaughterhouses, animal farms and bathing facilities is needed. When leptospirosis is suspected in animals, farm workers or employees should be protected with appropriate clothing, footwear (rubber boots) and gloves. Vaccination of domestic animals has significantly reduced the number of cases. Vaccination of dogs is recommended because of the high number of cases of leptospirosis in children who have been in contact with dogs.