Oropouche virus disease

Oropouche virus disease (also known as Oropouche fever) is caused by a virus of the *Orthobunyavirus* genus. Oropouche fever is a tropical viral infection transmitted by the bites of infested midges (Culicoides spp.) and certain mosquitoes.

The virus was first discovered 1955 in Trinidad and Tobago, near the Oropouche river, from which the disease derives its name. The Oropouche virus disease is endemic to the Amazon, but has also spread to other parts of South and Central America. More than 30 major outbreaks have been recorded, primarily in Brazil, Peru, Panama, and the Caribbean. In 2024, the Oropouche virus spread to Cuba and caused a large-scale outbreak. In June and July 2024, 19 imported cases of Oropouche virus infection were detected in Europe. Most travellers were infected in Cuba, and one in Brazil. In Slovenia, we have not yet confirmed any imported cases of Oropouche virus infection.

Cause

The cause of the disease is Oropouche virus.

Transmission

The Oropouche virus is transmitted among humans or from infected animals (primarily mammals) to humans only by certain types of midges and mosquitoes. The presence of suitable vectors for the Oropouche virus has not yet been confirmed in Europe; therefore, we expect only isolated imported cases without local transmission.

There are reports that vertical transmission is possible, meaning that the virus is transmitted from an infected pregnant woman to the foetus, causing birth defects.

Incubation period

The disease develops 3–10 days after infection. The onset is rapid, with the appearance of a high fever and other symptoms/signs.

Signs and symptoms

It is possible that, following infection with the Oropouche virus, symptoms of the disease do not develop, and the patient remains asymptomatic. It is estimated that approximately 40% of infections are asymptomatic.

The illness usually begins with a sudden onset of fever (38–40 °C), accompanied by a severe headache, chills, muscle and joint pain, nausea, vomiting, dizziness, sensitivity to light and a rash. The illness usually lasts less than a week (2–7 days), though in some patients symptoms recur after a few days or even weeks. The symptoms of Oropouche virus infections are quite similar to those of certain other tropical infections, such as Zika, dengue, or chikungunya.

In rarer cases, the Oropouche virus causes meningitis and/or encephalitis. Approximately 4% of patients experience dizziness, nausea, vomiting, drowsiness, confusion, neck stiffness, and nystagmus – these symptoms and signs indicate involvement of the central nervous system.

Blood test results may show lymphopenia, leukopenia, and, less commonly, thrombocytopenia; C-reactive protein and liver enzymes may be elevated.

Serious complications primarily occur during foetal development. Cases of microcephaly, preterm birth, ventriculomegaly, and miscarriages with infection in pregnant women. The link between foetal abnormalities and maternal infection has not yet been definitively confirmed, but the likelihood of a causal relationships is high.

Treatment

There is no specific treatment or vaccine. Treatment focuses on relieving symptoms.

Diagnosis

The clinical course of Oropouche virus is not characteristic; confirmation requires testing of samples for the presence of the Oropouche virus genome or for the presence of specific IgG and IgM antibodies.

Patients with suspected Oropouche virus disease are referred for testing by a specialist. Testing for Oropouche virus infection is performed by the Laboratory for Zoonosis Diagnostics at the Institute of Microbiology and Immunology of the Faculty of Medicine in Ljubljana.

Prevention

Prevention of infection relies on personal protective measures to prevent bites from midges and mosquitoes when travelling to endemic or epidemic areas.

Preventive measures against mosquito and midge bites include the use of repellents, insecticides, protective nets, and appropriate clothing. Appropriate repellents are those containing between 30% and 50% DEET or at least 20% picaridin. Insecticides can be used to treat clothing or protective nets and indoors to eliminate mosquitoes. Protective nets must be free of damage, and sleeping nets must be tucked under the mattress. Clothing and foot wear should cover as much skin as possible. Clothing can also be treated with insecticides to reduce the risk of bites.

We advise against travel to endemic or epidemic areas for pregnant women.