NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

FAQ: Oropouche fever

1. What is Oropouche fever?

Oropouche fever (or Oropouche virus disease) is a febrile illness caused by Oropouche virus (OROV). OROV is an arbovirus of the *Orthobunyavirus* genus, belonging to the family *Peribunyaviridae*. It was first discovered in a small community, Vega de Oropouche, in Trinidad, an island country in Eastern Caribbean, in 1955. It is primarily transmitted to humans through the bite of infected midges, particularly the species *Culicoides paraensis* although it may also be spread by certain types of mosquitoes. The natural ecological cycle of the virus involves other hosts such as non-human primates, sloths and birds.

2. Where does Oropouche fever occur?

OROV has not been found in South Africa. It is common arbovirus infection in many South and Central America and the Caribbean. Since December 2023, Oropouche fever outbreaks were recognized in areas with known endemic disease, but also from areas in South America and Cuba where it had not been historically reported. During the first 29 weeks of 2024 more than 8000 cases have been reported from Bolivia, Brazil, Colombia, Cuba, and Peru. In 2024, cases of Oropouche fever have been reported in travellers to Brazil and Cuba.

3. How is Oropouche fever transmitted?

The primary transmission vector is the *Culicoides paraensis* midge, but some mosquitos can transmit the OROV e.g., *Culex quinquefasciatus*, which is also a vector of West Nile virus. Cases of transmission from mother to foetus (vertical transmission) have been documented. Currently, no evidence supports human-to-human transmission other than through vertical transmission. Although there have been no documented cases of sexual transmission, the virus was detected in the semen of Oropouche virus-infected patients. Occupational exposure to OROV through aerosolization or ingestion in the laboratory has been reported.

4. What are the signs and symptoms of Oropouche fever?

Based on existing knowledge, the signs and symptoms develop within four to eight days of infection and most resolve within seven days:

- Sudden onset of high fever

- Headache
- Muscle and joint pain
- Chills
- Fatigue
- Nausea and vomiting
- Maculopapular rash
- Photophobia (sensitivity to light)
- In some cases, the disease can lead to neurological complications such as meningitis or encephalitis.

In many cases, mild symptoms tend to recur two or three weeks post first symptom onset. Deaths have been rarely reported.

These signs and symptoms may be found with many other arboviral infections (such as dengue fever, Zika fever and chikungunya), but also other infectious diseases. It is important to consider the opportunity for exposure to the OROV, so typically Oropouche fever would be considered in patients who have had recent travel history to areas where the disease is reported.

5. How is Oropouche fever diagnosed?

Oropouche fever is clinically diagnosed by considering the clinical presentation of the case and possible exposure history (travel to an endemic area). Clinical diagnosis alone is not recommended as there are other viruses with similar symptoms such as dengue and chikungunya in the same geographical locations. During early stages of the disease, reverse transcription polymerase chain reaction (RT-PCR) is used to investigate suspected cases. The detection of IgM and IgG antibodies against OROV is also used to determine if recent infection has occurred as they are formed between one and 14 days after infection.

6. How is Oropouche fever treated?

There is currently no specific antiviral treatment for OROV fever. Treatment is supportive and focuses on managing symptoms, such as using analgesia (pain relievers) and antipyretics (fever reducers). Hospitalization may be required for severe cases that develop neurological complications.

7. Who is at highest risk?

People living in endemic areas are at the greatest risk of infection. Pregnant women are especially vulnerable if infected due to potential vertical transmission (mother-to-foetus) and associated foetal complications (such as stillbirths and microcephaly). Travellers to such areas may be diagnosed with Oropouche fever when returning to South Africa.

8. How is Oropouche fever prevented?

There is currently no vaccine to prevent OROV infection. Prevention is focused on preventing human exposure to midges and mosquito bites in endemic areas. Health education addressing behaviour change includes avoiding bites by wearing long sleeved clothing, using bed nets and insect repellent in endemic areas. Environmental

controls, such as reducing standing water around residential areas or homes to limit sites for midge breeding, are also useful preventative measures.

9. Where can I find more information?

Medical/clinical queries (Healthcare workers only): NICD Hotline Doctor on Call 0800 212 552