



OROPOUCHE VIRAL DISEASE – A REVIEW ARTICLE

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ABSTRACT

Oropouche viral illnesses are caused by Oropouche Orthobunyavirus and are transmitted through the bite of midges and some mosquitos. This viral infection is characterized by a fever and a rapid recovery time within 3-4 days, the following symptoms will appear: fever, myalgia, arthritis, anorexia, dizziness, chills, photophobia, nausea, vomiting, diarrhoea, Conjunctive Congestion and epigastric Pain. Meningitis causes retro-Orbital Pain. Other symptoms include dizziness, retroorbital and eye Pain. Nausea and vomiting. Maculopapular Rash That begins on the trunk and spreads to the extremities, severe abdominal Pain and haemorrhagic Symptoms. Oropouche infection is diagnosed in the laboratory using both classical and molecular virology techniques. Reverse transcription polymerase chain reaction (RT-PCR), Plaque reduction, Plaque reduction neutralized test (PRNT), Complement fixation test, hemagglutination inhibition (HI) test and Enzyme immune assay (EIA) are all tests that can diagnose the disease.

KEYWORDS : Oropouche viral , Fever, midges and mosquitos.

INTRODUCTION:

Oropouche virus, named in keeping with the tradition of designating arboviruses by using local geographic names, stems from the name of the village, a nearby swamp and river. Since the last Disease Outbreak News on this event was published on 23 August 2024, three additional countries and one territory .Have reported confirmed Oropouche virus disease in the Region of the Americas in 2024. In addition, imported Oropouche cases have been reported from Canada, the United States of America and countries of the European Region.

Definition

The Oropouche virus, which causes Oropouche virus disease (sometimes called Oropouche fever), is a feverish condition that usually goes away quickly. It is contracted by humans through the bites of *Coquilletti diavenezuelensis* mosquitoes and infected biting midges. (OR) Oropouche orthobunyavirus is one of the most common orthobunyaviruses. When OROV infects humans, it causes a rapid fever illness called Oropouche fever. (OR) Oropouche fever is a tropical viral infection which can infect humans. It is transmitted by biting midges and mosquitoes, from a natural reservoir which includes sloths, non-human primates, and birds.

Incidence

January and 20 July 2024, there were 8078 confirmed Oropouche cases reported in the Region of the Americas, including two deaths. The cases are reported among five countries in the region: the Plurinational State of Bolivia (356 cases), Brazil (7284 cases, including two deaths), Peru (290 cases), Colombia (74 cases), and Cuba (74 cases). December 17, 2024: more than 20 cases identified in the U.S.

Causes

Oropouche virus disease is caused by a virus, which is a tiny piece of genetic material (in this case, RNA) covered in a protective layer. Oropouche orthobunyavirus is its scientific name; it is occasionally shortened to OROV. Oropouche virus spreads through the bite of midges *Culicoides paraensis* and certain mosquitoes.

Epidemiology

Prior to the advent of the chikungunya and Zika viruses in 2013 and 2015, Oropouche virus disease was the second most prevalent arboviral disease in South America, after dengue.

Oropouche virus sickness was documented in Trinidad and Tobago, French Guiana, Venezuela, Brazil, Bolivia, Colombia, Ecuador, Haiti, Panama, and Peru by the end of 2023. The majority of these cases were found in the vicinity of the Amazon jungle. Nonetheless, the number of cases reported has increased since December 2023, even in regions where transmission had not been previously recorded.

Seven Latin American and Caribbean nations—Brazil, Bolivia, Colombia, Cuba, Guyana, Peru, and the Dominican Republic—reported cases of locally transmitted Oropouche virus disease in 2024. Furthermore, reports of Oropouche viral sickness cases among returning tourists

Mode Of Transmission

The bite of *Culicoides paraensis* midges is the main way that the Oropouche virus infects humans. Additionally, mosquitoes such as *Aedes serratus*, *Culex quinquefasciatus*, and *Coquilletti diavenezuelensis* may serve as carriers. It is thought that the virus spreads through an urban epidemic cycle between insects and humans as well as a sylvatic cycle in wooded areas. Non-human primates, sloths, and possibly birds are vertebrate hosts in the sylvatic cycle, but no clear arthropod vector has been found. There had not been any verified reports of human-to-human transmission before. However, allegations of a potential Oropouche virus infection in the fetus, spread by pregnant women infected with the virus, surfaced in Brazil in 2024. Oropouche viral disease is transmitted through sexual contact.

Incubation And Transmission Periods

For the first three to four days after the onset of symptoms, when the viremia is strong enough to infect biting midges, the patient's blood is infectious to *Culicoides paraensis* during the acute phase of the illness. The extrinsic incubation period is five days or longer, according to experimental investigations conducted on hamsters (*Mesocricetus auratus*).

Clinical Manifestation

Headache, fever, myalgia, arthralgia, anorexia, dizziness, chills, photophobia, nausea, vomiting, diarrhoea, conjunctive congestion, epigastric pain, retro-orbital pain, meningitis

Other Symptom

- Dizziness
- Retroorbital

- Eye Pain
- Nausea
- Vomiting
- Maculopapular Rash That Starts On The Trunk And Goes To The Extremities
- Severe Abdominal Pain
- Haemorrhagic Symptoms (E.G.Epistaxis, Gingival Bleeding, Melena, Menorrhagia, And Petechiae).

Diagnosis

Laboratory diagnosis of the oropouche infection is done through classic and molecular virology technique

- Reverse transcription polymerase chain reaction (RT-PCR)
- Plaque reduction neutralized test (PRNT)
- Complement fixation test
- Hemagglutination inhibition (HI) test
- Enzyme immune assay (EIA)

Complications

- Infected persons are not taken proper treatment they become more complication
- Aseptic meningitis
- Still birth
- Spontaneous miscarriage
- Microcephaly
- Fetal death

Prevention

- Removal and modification of breeding sites of mosquitoes and midges.
- Reducing contact between midges and people.
- Apply repellent when you're going outside.
- Reducing the number of natural and artificial water-filled habitats in which the midge larvae grow.
- Using mosquito's sprays.
- Change water in pet bowls and bird baths frequently clean your roof gutters on a regular basis
- Remove water sources around the house that includes containers, pot plants or items.
- Take 200mg of vitamin B1 twice a day with meals, starting two weeks before exposure to midges.

Treatment

- No Specific Therapy
- Symptomatic Treatment
- Antipyretic (Acetaminophen Ibuprofen)
- Non -Steroid Anti - Inflammatory Drug
- Analgesic
- Antiemetic
- Anti Diarrheal Drug
- IV Fluid

Aspirin is not a recommended choice of drug because it can reduce blood clotting and may aggravate the haemorrhagic effects and prolong recovery time Ribavirin is ineffective and is not recommended.

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#Cause

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