MEDICAL MANAGEMENT PLAN

OROPOUCHE VIRUS (OROV)

Below are instructions for care of patients presenting with exposure to Oropouche virus.

POST-EXPOSURE CONTACTS

Contact UW Employee Health Center Nurse	206-685-1026 (M-F, 8am-5pm)
If After-Hours, Go to UW Medical Center Emergency Room	206-598-4000
Contact UW Environmental Health & Safety Dept. for assistance	206-221-7770 (M-F, 8am-5pm)
Call 911 for a life-threatening emergency	911

Medical Protocol

First aid	Percutaneous or mucous membrane exposure: wash affected area with warm water and soap for 15 minutes and contact Employee Health Center. Remove yourself from incident area and contact Employee Health Center.
Surveillance	Initial and post exposure medical counseling for those who are pregnant or planning a pregnancy.
Reproductive risks	Those who are pregnant or planning a pregnancy are advised to avoid working with OROV due to the potential for adverse reproductive effects. Refer to the Biological Reproductive Hazards Focus Sheet.
Post exposure	Employee post-exposure counseling should include the following: 1. Prevent midge and mosquito bites for the next 3 weeks. Use insect repellent labeled for mosquitoes and midges and wear long sleeves and pants while outside in insect habitat. 2. Use reliable birth control or abstain from sex while in the incubation period **Recommended post exposure blood work:** 1. Testing for Oropouche is available through the CDC. Testing includes RT-PCR, Serology (acute and convalescent), and plaque reduction neutralization testing (PRNT). Notify Public Health Seattle King County regarding exposure and permission to send test 206.296.4774. In addition, the CDC Arbovirus Disease Branch can be contacted at ADBClinicalTeam@cdc.gov for testing information
Treatment	There is no specific antiviral treatment recommended for OROV infection.
Reporting	Report all accidents, injuries and near miss events as soon as possible on the UW Online Accident Reporting System (OARS).

BACKGROUND INFORMATION

Mode of transmission

OROV is transmitted to humans primarily through the bite of an infected midge (*Culicoides paraensis*) or mosquito (*Culex or Aedes*). OROV is maintained in nature through both an urban and sylvatic cycle. The urban cycle primarily involves the biting midge. Humans are believed to be the only invertebrate host in the urban cycle. Wild birds, the three-toed sloth and certain species of New World non-human primates (NHP) are involved in the sylvatic cycle. It is suspected that OROV can be vertically transmitted to a fetus. Evidence of sexual transmission is unknown at this time.

Treatment of laboratory and animal care personnel

Transmission by either percutaneous or mucous membrane exposure. This virus has not been found to be spread through inhalation of the virus. Follow a minimum of biosafety level 2 requirements for containment, practices and personal protective equipment. Follow the containment level indicated on your Biological Use Authorization (BUA) Letter from the UW Institutional Biosafety Committee (IBC).

Infectious dose

Unknown

Incubation period

Range 3-12 days

Communicability

During the first week of infection, OROV can be found in the blood and passed from an infected person to another person through midge or mosquito bites. More info in transmission section above.

Vaccines

No vaccine currently available.

Characteristics

OROV is an enveloped virus with a tripartite genome composed of three single-stranded, RNA segments. It is a member of the Simbu serogroup of viruses within the Orthobunyavirus genus of the family Peribunyavaridae.

Signs and Symptoms

Acute onset of fever headache, retro-orbital pain, malaise, myalgia, nausea, vomiting and photophobia. Less frequent symptoms include rubella-like rash, meningitis, encephalitis, dizziness, anorexia. Hemorrhagic phenomena such as epistaxis, gingival bleeding and petechiae, headache, and diarrhea are less frequent.

There have been reports of a serious birth defect of the brain called microcephaly (a condition in

which a baby's head is smaller than expected when compared to babies of the same sex and age) in mothers who were infected with OROV while pregnant. Knowledge of the link between OROV and these outcomes is evolving, but until more is known, CDC recommends special precautions.

Survival Outside the Host

Unknown

Prior Laboratory Acquired Illness

Unknown

Personnel Affected

This plan is for UW personnel whose work involves direct or indirect contact with OROV and for personnel with peripheral responsibilities that support facilities or research spaces where work with OROV occurs. Personnel are categorized by potential for exposure to the virus based on work activities.

Principal Investigators or lab/facility managers must provide and document OROV specific hazard training. They must also ensure personnel receive medical counseling, follow safety protocols, and any workplace restrictions outlined by the Employee Health Center.

Individuals with the potential to become pregnant that have direct contact with OROV are required to receive in-person medical counseling from the UW Employee Health Center (EHC) prior to initiation of work with this agent. Hazard awareness training for these individuals is provided by the EHC and Principal Investigator/lab or facility manager.

Personnel with indirect contact to OROV may choose to receive medical counseling from the UW Employee Health Center prior to initiation work with the virus. Hazard awareness training for these individuals is provided by the Principal Investigator or lab/facility manager.

Other personnel with very minimal likelihood of exposure to are not required to receive medical counseling but are encouraged to contact EHC if they have health or medical questions.

Table 1. Occupational Health Summary

Potential for exposure	Work activities	Medical counseling
Direct contact	• Work directly with viral cultures, infected material, or any items that have come into contact with OROV • Animal husbandry and care of infected animals (when work in vivo), including handling of bedding of infected animals • Work in rooms or facilities where animals and procedures are not in primary containment devices (e.g., NHP rooms)	Required prior to work if pregnant or planning to become pregnant
Indirect contact	• Do not directly handle OROV, infected animals, or any materials contaminated with the virus as described above • Are present in the same laboratory or animal room where work with OROV occurs. Animals and work is in containment devices (e.g., ABSL-2 rodent rooms).	Available (voluntary)
Very minimal likelihood of exposure	• May enter the workspace where OROV work occurs after agents secured and space decontaminated • Includes custodians, facilities services, and other non-research personnel	Available (voluntary)

Documentation of in-person or video connected counseling and understanding of risk and safety measures (including potential REPRODUCTIVE RISK) of working with OROV (retained by Employee Health Center)

By signing below, I indicate that I have read and understand the risks associated with working with OROV virus. I have been given a chance to ask questions. I will adhere to the policy, medical requirements, safe work practices, and accident reporting outlined in the policy.

Employee Name	Hazard/Risk Awareness Training Date	Signature of UW EHC Person performing Counseling	Employee Signature

(Copies to PI or supervisor, employee and EHC)

REFERENCES

1. Centers for Disease Control and Prevention (CDC): https://wwwnc.cdc.gov/travel/notices/level1/oropouche-fever-brazil Accessed 8/7/2024.
2. Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/oropouche/hcp/clinical-overview/index.html Retrieved 8/16/2024.
3. Files, M. (2022) Baseline mapping of Oropouche virology, epidemiology, therapeutics and vaccine research and development. NPJ Vaccines. 2022; 7: 38.
4. Wesselmann KM, Postigo-Hidalgo I, Pezzi L, de Oliveira-Filho EF, Fischer C, de Lamballerie X, Drexler JF (July 2024). "Emergence of Oropouche fever in Latin America: a narrative review". *Lancet Infect Dis*. 24 (7): e439–e452.