UNIVERSITY OF South Carolina

Mayaro Virus (MV)

General Information

Mayaro virus is an arbovirus member of the *Alphavirus* genus and *Togaviridae* family. It is an enveloped, single-stranded RNA virus with a complex transmission cycle involving mosquitoes and animals. It is spherical and has icosahedral symmetry. Mayaro virus infections are common in human populations living in rural areas in northern South America and the Amazon Basin.

Host Range

Humans, non-human primates, birds, rodents

Incubation Period

Usually 6-12 days

Survival Outside Host

Unknown; less than one day in culture medium at 37°C.

Laboratory Hazards

Parenteral inoculation, non-intact skin exposure, mucous membrane exposure, aerosols. No evidence of person-to-person transmission.

Symptoms of Exposure

Mayaro virus infection causes acute febrile illness that persists 3-5 days. The most common symptoms are fever and headaches. Myalgias, arthralgias, maculopapular rash, chills, nausea, photophobia, epigastric pain, nausea, and vertigo are less frequently reported. The joint pain may persist for several months.

Lab Acquired Infections (LAIs)

At least 6 cases of lab-acquired infection with the Mayaro virus have been reported, with one suspected to have occurred by airborne transmission.

Personal Protective Equipment

Disinfection & Inactivation

Mayaro virus is susceptible to 70% ethanol, 1% sodium hypochlorite, 2% glutaraldehyde, and lipid solvents. MV is sensitive to moist heat, dry heat, and drying.

Waste Management

Refer to USC's Biological and Infectious Waste Management Plan .

Lab Containment

Biosafety Level 2 (BSL-2) for activities with materials and cultures known or reasonably expected to contain Mayaro virus.

Animal Containment

Animal Biosafety Level 2 (ABSL-2) for activities with experimentally infected animals.

Medical Surveillance/Treatment

Surveillance: Infection can be confirmed using serological tests, PCR analysis, or viral isolation in tissue culture.
Prophylaxis: None
Vaccines: None approved
Treatment: Supportive care such as non-steroidal anti-inflammatory drugs for pain relief.

Spill Procedures

See USC Biological Spill Procedures

Exposure Procedures

See USC Protocol for Post Exposure Evaluation and Follow-up. Use of sharps should be strictly limited. A biosafety cabinet should be used when there is a potential to create aerosols or droplets.

References

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