Journal of Virology & Antiviral Research

Commentary A SCITECHNOL JOURNAL

Global and Local Perspectives on Mpox: Understanding the Disease and Its Impact

Phoebe Danza*

Department of Virology, University of Florida, Florida, United States of America

***Corresponding author:** Phoebe Danza, Department of Virology, University of Florida, Florida, United States of America; E-mail: phoebe.d@county.gov

Received date: 21 August, 2024, Manuscript No. JVA-24-145963;

Editor assigned date: 26 August, 2024, PreQC No. JVA-24-145963 (PQ);

Reviewed date: 10 September, 2024, QC No. JVA-24-145963;

Revised date: 13 April, 2025, Manuscript No. JVA-24-145963 (R);

Published date: 20 April, 2025, DOI: 10.4172/ 2324-8955.1000703.

Description

In recent years, the term "Mpox" has gained increasing attention in the medical community and media. Formerly known as Monkeypox, Mpox is a viral zoonotic disease that has emerged as a significant public health concern. This manuscript provides a comprehensive overview of Mpox, including its etiology, transmission, clinical presentation, diagnosis, treatment, and preventive measures. Mpox is caused by the Mpox virus, a member of the *Orthopoxvirus* genus in the Poxviridae family. The virus is closely related to the variola virus, which causes smallpox, and the cowpox and vaccinia viruses. It was first identified in laboratory monkeys in 1958, hence its initial name. However, Mpox is not exclusively a disease of monkeys; it can infect various animal species, including rodents, which are believed to be the primary reservoirs.

Historically, Mpox was confined to Central and West Africa, where it was a rare but notable disease. However, outbreaks in non-endemic regions have occurred, highlighting its potential for international spread. The 2022 global outbreak marked a significant shift in its epidemiological profile, indicating that Mpox can affect diverse populations beyond its traditional geographic boundaries.

Transmission

Mpox is primarily transmitted to humans through direct contact with infected animals or their bodily fluids. Rodents, such as squirrels and rats, are considered key reservoirs for the virus. Human-to-human transmission can occur via respiratory droplets, contact with bodily fluids or contaminated materials, and through close physical contact. The virus can also spread through sexual contact, as evidenced by recent outbreaks.

The incubation period for Mpox ranges from 5 to 21 days, with symptoms typically appearing 7 to 14 days after exposure. This period of time allows the virus to multiply and establish itself before clinical signs become apparent.

Clinical presentation

The clinical presentation of Mpox can be categorized into two main stages: the prodromal phase and the rash phase.

Prodromal phase: This phase usually lasts 1 to 4 days and is characterized by flu-like symptoms such as fever, chills, headache, muscle aches, backache, and swollen lymph nodes. The lymphadenopathy is a distinguishing feature of Mpox, setting it apart from other poxviruses like smallpox.

Rash phase: Following the prodromal phase, patients develop a rash that progresses through several stages. The rash typically begins on the face and then spreads to other parts of the body, including the arms and legs. The progression of the rash involves macules, papules, vesicles, pustules, and scabs. The lesions can be painful and may cause significant discomfort.

The severity of symptoms can vary, with some individuals experiencing mild illness and others developing more severe manifestations. Complications can include secondary bacterial infections, pneumonia, and in severe cases, death.

Diagnosis

Diagnosis of Mpox involves a combination of clinical evaluation and laboratory testing. Key diagnostic methods include:

Clinical evaluation: A healthcare provider will assess symptoms, travel history, and exposure to potential sources of infection. The presence of characteristic lesions and lymphadenopathy can suggest Mpox.

Laboratory testing: Confirmatory tests include Polymerase Chain Reaction (PCR) assays, which detect viral DNA in lesions or blood samples. Serological tests can also be used to identify specific antibodies against the Mpox virus.

Differential diagnosis: Mpox must be distinguished from other conditions with similar symptoms, such as smallpox, chickenpox, syphilis, and other viral exanthems.

Treatment

There is no specific antiviral treatment for Mpox. Management primarily focuses on supportive care to alleviate symptoms and prevent complications. This includes:

Symptomatic relief: Pain relievers, fever reducers, and antihistamines can help manage symptoms. Proper hydration and nutrition are also crucial.

Antiviral medications: In severe cases, antiviral medications like tecovirimat (TPOXX) and cidofovir may be used under certain conditions, particularly for high-risk patients or those with severe disease.

Isolation and infection control: Patients with Mpox should be isolated to prevent the spread of the virus. Infection control measures, such as proper hand hygiene and the use of Personal Protective Equipment (PPE), are essential.

Preventive measures

Prevention of Mpox involves a combination of strategies aimed at reducing transmission and exposure. Key preventive measures include:

Vaccination: The smallpox vaccine has been shown to provide some cross-protection against Mpox. Vaccination is particularly

recommended for healthcare workers and individuals at high risk of exposure.

Avoiding contact with infected animals: Reducing contact with potentially infected animals and practicing good hygiene can help minimize the risk of zoonotic transmission.

Public awareness: Educating the public about the symptoms of Mpox and the importance of seeking medical attention if exposed can enhance early detection and containment.

Monitoring and surveillance: Enhanced surveillance and monitoring in areas with known outbreaks can help detect and control the spread of the virus.

Conclusion

Mpox represents a growing public health concern with its evolving epidemiology and potential for widespread outbreaks. Understanding the virus's transmission, clinical presentation, and preventive measures is crucial for managing and controlling its impact. Ongoing research, improved diagnostic tools, and effective public health strategies will be key to addressing Mpox and mitigating its global health threat.