
EDITORIAL**Understanding mpox - A resurgent global health challenge***Supriya Satish Patil**Executive Editor, Journal of Krishna Institute of Medical Sciences University,
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The resurgence of zoonotic diseases in recent decades has placed public health systems worldwide under immense strain. Among these, **mpox**, formerly known as monkeypox, has reemerged as a pressing global health concern. This viral zoonotic disease, first identified in 1958, predominantly affected Central and West African countries but has recently transcended borders, highlighting significant gaps in global preparedness and surveillance systems.

Mpox is caused by the Monkeypox Virus (MPXV), a double-stranded DNA virus belonging to the Orthopoxvirus genus, which also includes variola virus (smallpox). There are two distinct clades of the virus: clade I (with subclades Ia and Ib) and clade II (with subclades IIa and IIb). A global outbreak of clade IIb began in 2022 and continues to this day, including in some African countries. There are also growing outbreaks of clades Ia and Ib affecting the Democratic Republic of the Congo and other countries in Africa. As of August 2024, clade Ib has also been detected beyond Africa.

The virus is transmitted to humans through contact with infected animals, individuals, or contaminated materials. Initial symptoms include fever, headache, lymphadenopathy, and myalgia, followed by a characteristic vesiculopustular rash that often mimics smallpox or chickenpox. Complications such as secondary bacterial infections, sepsis, and encephalitis can lead to higher morbidity and mor-

tality, especially among children and immunocompromised individuals [1].

The **2022 mpox outbreak** presented atypical clinical features, with cases largely reported in non-endemic countries across Europe, North America, and Asia. Notably, transmission patterns indicated a shift, with a significant proportion of cases linked to close human-to-human contact, including sexual transmission. In August 2024, the World Health Organization (WHO) declared the ongoing mpox outbreak a public health emergency of international concern [2]. Vaccines such as the Modified Vaccinia Ankara (MVA) vaccine and antiviral drugs like tecovirimat have shown promise in managing the disease. However, equitable access to these resources remains a significant challenge, particularly in low- and middle-income countries [3].

Furthermore, the renaming of the disease to mpox by WHO marks an important step in eliminating stigma associated with its earlier name, ensuring sensitive public health communication. Public health strategies must also focus on addressing misinformation, which has often fueled fear and delayed timely interventions.

Research and surveillance are indispensable in understanding the epidemiology, transmission dynamics, and genetic evolution of MPXV. The role of asymptomatic carriers, environmental reservoirs, and the potential for human-to-human transmission needs further exploration. Cross-sectoral

collaborations between governments, healthcare systems, and international organizations are essential for developing robust surveillance systems and response frameworks.

For nations like India, where zoonotic diseases pose significant public health challenges, streng-

thening healthcare infrastructure, educating healthcare workers, and improving laboratory diagnostic capacity are paramount. Integration of mpox management into existing programs for infectious diseases can enhance resource utilization and preparedness.

References

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