

Journal of Ongoing Biosciences

journal homepage: https://gaaspi.com/journal-of-ongoingbiosciences/journal-home



pages 1-5

2024 Volume-1, Issue-1

Editorial

# Monkeypox: Prevention of a possible outbreak in Asia

Muhammad Tufail Yousaf<sup>1</sup>, Asfandyar<sup>2\*</sup> and Rahat Ullah Khan<sup>1\*</sup>

- Institute of Microbiology, Faculty of Veterinary and Animal Sciences, Gomal University, Dera Ismail Khan 29111, Pakistan.
- State Key Laboratory of Biocatalysis and Enzyme Engineering, College of Life Sciences, Hubei University.

## \*Correspondance

Asfandyar, State Key Laboratory of Biocatalysis and Enzyme Engineering, College of Life Sciences, Hubei University.

Email: asfandyarmicro@gmail.com

Rahat Ullah Khan, Institute of Microbiology, Faculty of Veterinary and Animal Sciences, Gomal University, Dera Ismail Khan 29111, Pakistan.

Email: rahatullahkhan@gu.edu.pk

Received: 02/08/2024 / Revised: 12/10/2024 / Accepted: 23/10/2024

## **Respected Editor**

The monkeypox (Mpox) virus was first identified in Africa in 1970. It is categorized as a member of the Poxviridae family and belongs to the genus Orthopoxvirus [1, 2]. Through contact with contaminated materials, people, or animals that are affected, the virus can spread [3]. The

respiratory tract and open wounds are the main entry points for the virus into the body. Animal bites, scratches, direct touch with blood or other bodily fluids or lesions, and indirect interaction with a lesion are some ways that pathogens can spread from animals to people [3, 4]. Though other transmission modes might be possible, prolonged face-to-face contact with big respiratory droplets is the main way the virus spreads from person to person [5]. In addition to zoonotic transmission, Mpox can be transmitted among humans by both sexual and non-sexual means, consisting of contact with body fluids or wounds on the skin or mucosal surfaces of the internal organs. As of 11 May 2023, the Mpox outbreak stopped to be considered a global public health emergency [6, 7].

Nevertheless, the number of Mpox cases has significantly risen in Asia and worldwide since February 2023. Asian countries are still at risk of a Mpox outbreak, as evidenced by the WHO's global situation update showing that Mpox cases are continually rising [7, 8]. Furthermore, if local transmission is not stopped immediately, this highly populous nation may contribute to the global spread of Mpox [9]. Hence, it is crucial to implement measures to prevent the spread of Mpox in communities, considering the unknown future epidemiological scenario in Asia. This should be done by drawing on public health views and studying the strategies employed by nations that have effectively controlled Mpox. What is there for Asia countries to obtain learning from other nations? In the United Kingdom, the Health Security Agency has advised the identification and subsequent contact of individuals who may have had close contact with cases of Mpox infections. According to their signs and symptoms, these individuals will be screened or isolated [10]. General practitioners in the UK must report suspected or confirmed cases of Mpox to their local public health authorities, as this condition is a notifiable disease [10, 11]. The UK healthcare system can quickly identify those with Mpox infections and locate their close contacts to prevent transmission among the surrounding population. The urgency of strengthening Asia countries' medical institutions' sensitivity to detect Mpox patients and establish comprehensive contact-tracing mechanisms promptly is underscored by this prompt response. The government must bolster Mpox surveillance, particularly in populations with elevated infection risk.

It is also necessary to tackle concerns by enhancing health education and screenings for people with high risk. Smallpox vaccinations for high-risk populations have effectively prevented Mpox in the United States, an essential approach for protecting exposed populations [12]. The Chinese

CDC issued the Mpox Prevention and Control Plan on July 26, 2023, to give complete and precise regulation for the nationwide restriction and limitation of Mpox. In response to the ongoing Mpox epidemic in China and the requirement of executing systematic and standardized measures to stop and control the spread of Mpox, the Chinese National Health Commission has declared Mpox as a class B national notifiable infectious disease, effective from 20 September 2023. This classification aims to assist in corresponding efforts among different departments to prevent and control the spread of Mpox. China now has 41 nationally reported infectious diseases, of which 28 are classified as class B [13]. Among groups most likely to contract Mpox, continuing surveillance, identification, and prevention activities is imperative even though the disease has been added to China's list of class B national notifiable infectious diseases. This is vital to effectively control the spread of Mpox, specifically counting the vast population of men who have sex with men (MSM) and the weakly equipped primary health service system in China [13]. The majority of the 521 Chinese participants in the 2023 study (398 [76.4%]) were willing to accept the Mpox immunization, indicating the rationale behind increasing vaccine coverage among those at higher risk of disease [14]. A study conducted in 2022 among Pakistani students found that the rate of acceptability of vaccination among the students was 67.7% for the Mpox vaccine [15].

It is a commendable effort that the National Command and Operation Center at the National Institute of Health has created and distributed procedures for preventing, detecting, monitoring, and responding to malaria [16, 17]. Government officials have implemented stricter screening methods, and Border Health has provided recommendations to improve the screening of international passengers. To safeguard Asia countries' delicate public health systems, it is imperative to implement proactive measures to prevent the initial spread of diseases. As a viral disease, Mpox necessitates more global surveillance. Health officials must take this seriously and implement an improved surveillance system and efficient contact tracing technique to stop the spread of disease and avoid possible spillovers to neighboring countries.

As a result, immunizing populations with specific vaccines after assessing their risk of contracting Mumps based on contact tracing results may be a more economical and successful way to manage the disease. Asia countries and other countries must take international and domestic lessons to help contain the possible Mpox outbreak. Before implementing any control

measures, Mpox must be recognized as a disease that requires notification to health authorities, with all the patients needed to report cases to them. Additionally, Countries should seriously assess and derive insights from the COVID-19 pandemic, which witnessed a record and prompt increase in infections worldwide in recent years. Finally, all countries must take note of the thriving experiences of other nations, their highly efficient healthcare systems, and determined immunization campaigns for high-risk individuals. All countries should be capable of stopping any possible Mpox outbreaks by taking suitable action.

**Author Contributions:** Muhammad Tufail Yousaf, Asfandar, and Rahat Ullah wrote and drafted the manuscript. All authors have reviewed, approved, and agreed to the final published version of the manuscript.

Funding: Not applicable.

## Institutional Review Board Statement: Not applicable

Conflicts of Interest: The authors declare no conflict of interest.

### References

- 1. Laurenson-Schafer, H., et al., *Description of the first global outbreak of mpox: an analysis of global surveillance data.* The Lancet Global Health, 2023. 11(7): p. e1012-e1023.
- Ladnyj, I., P. Ziegler, and E. Kima, A human infection caused by monkeypox virus in Basankusu Territory, Democratic Republic of the Congo. Bulletin of the World Health Organization, 1972. 46(5): p. 593.
- 3. Khattak, S., et al., *The monkeypox diagnosis, treatments and prevention: A review.* Frontiers in Cellular and Infection Microbiology, 2023. 12: p. 2005.
- 4. Khattak, S., et al., *Monkeypox virus preparation in Pakistan-next viral zoonotic disease outbreak after COVID-19.* Biomed. Lett, 2022. 8(2): p. 196-201.
- 5. Patel, A., et al., *Clinical features and novel presentations of human monkeypox in a central London centre during the 2022 outbreak: descriptive case series.* bmj, 2022. 378.
- 6. Sarker, R., et al., *The WHO has ended public health emergency of international concern for mpox: assessment of upside and downside of this decision.* International Journal of Surgery, 2023. 109(10): p. 3238-3239.

- Organization, W.H. Fifth meeting of the International Health Regulations (2005)(IHR) emergency committee on the multi-country outbreak of mpox (monkeypox). in 2023-05-11)[2023-05-18]. <u>https://www</u>. who. int/news/item/11-05-2023-fifth-meeting-of-theinternational-health-regulations. 2005.
- 8. Khattak, S., et al., *Monkeypox Entry and Emergence Preparation in Pakistan*. 2023, MDPI. p. 2308.
- 9. Endo, A., S.-m. Jung, and F. Miura, *Mpox emergence in Japan: ongoing risk of establishment in Asia.* The Lancet, 2023.
- 10. Rallapalli, S., et al., *Diagnosis and management of monkeypox in primary care*. Journal of the Royal Society of Medicine, 2022. 115(10): p. 384-389.
- 11. Iacobucci, G., *Monkeypox: doctors in England will have to notify local agencies of all suspected cases.* BMJ: British Medical Journal (Online), 2022. 377: p. 01413.
- McQuiston, J.H., *The CDC Domestic Mpox Response—United States*, 2022–2023.
  MMWR. Morbidity and Mortality Weekly Report, 2023. 72.
- Du, M. and J. Liu, *Mpox added to national notifiable infectious diseases in China since* September 2023. The Lancet Regional Health–Western Pacific, 2023. 39.
- Dong, C., et al., *Knowledge and vaccination intention of monkeypox in China's general population: a cross-sectional online survey*. Travel Medicine and Infectious Disease, 2023. 52: p. 102533.
- 15. Kumar, N. et al., Monkeypox cross-sectional survey of knowledge, attitudes, practices, and willingness to vaccinate among university students in Pakistan. Vaccines, 2022. 11(1): p. 97.
- Wasif Malik M. Zeeshan Iqbal Baig Massab Umair M. National Guidelines for Mpox [Internet]. Accessed 18 December. Available from: https://www.nih.orgpk/wpcontent/uploads/2023/04/Conolidated-guidelines-Mpox.pdf.
- 17. Mughal, S., H. Javed, and M. Hasanain, *The emergence of mpox in Pakistan: An urgent call for preparedness and response*. Health Sci Rep, 2023. 6(9): p. e1556.