

CROSSING THE BORDERS – MONKEY POX IN AN HIV-POSITIVE PAKISTANI MAN TRAVELLING FROM THE KINGDOM OF SAUDI ARABIA; A CASE REPORTMuhammad Tabish Ikram¹, Faisal Hassan², Muhammad Irfan³, Faryal Miraj⁴, Yasir Ali⁵, Shah Fiaz⁶**Correspondence**

²Faisal Hassan, Postgraduate Resident, Department of Medicine, Hayatabad Medical Complex, Peshawar, Pakistan
☎: +92-333-3435398

✉: dr.faisalhsn@gmail.com

¹Postgraduate Resident, Department of Medicine, Hayatabad Medical Complex, Peshawar, Pakistan

³Postgraduate Resident, Department of Medicine, Hayatabad Medical Complex, Peshawar, Pakistan

⁴Postgraduate Resident, Department of Medicine, Hayatabad Medical Complex, Peshawar, Pakistan

⁵Postgraduate Resident, Department of Medicine, Hayatabad Medical Complex, Peshawar, Pakistan

⁶Postgraduate Resident, Department of Dermatology, Hayatabad Medical Complex, Peshawar, Pakistan

How to cite this article

Ikram MT, Hassan F, Irfan M, Miraj F, Ali Y, Fiaz S. Crossing the Borders – Monkey Pox in an HIV-Positive Pakistani Man Travelling from the Kingdom of Saudi Arabia; A Case Report. *J Gandhara Med Dent Sci*. 2023;10(4):89-91
<https://doi.org/10.37762/jgm.10-4.562>

INTRODUCTION

Monkeypox, recently renamed as Mpox, is a viral illness caused by one of the viruses belonging to the genus Orthopoxvirus in the Poxviridae family.¹ The first human case was reported from the Democratic Republic of Congo. It is endemic to western and central Africa, where it causes sporadic outbreaks due to contact with infected animals. Since May 2022, a global outbreak has been reported outside its traditionally restricted endemic regions.² The World Health Organization declared Mpox as "an evolving threat of moderate public health concern" on June 23, 2022.³ Monkeypox is transmitted via respiratory droplets, prolonged close or direct contact with cutaneous lesions, and perhaps through contaminated fomites.⁴ In the current outbreak, most cases are male and homosexual.² It presents with acute febrile illness, malaise, mucocutaneous lesions, and lymphadenopathy. Pneumonia, meningoencephalitis, keratitis, secondary bacterial infections, and acute epiglottitis are rare complications of Mpox. The diagnosis is confirmed by detecting viral DNA in the mucocutaneous lesions by polymerase chain reaction. The management is mainly

ABSTRACT

Monkeypox, now called Mpox, was previously endemic to central and western Africa; however, a recent outbreak of Mpox was noticed outside its traditional endemic regions. We report a case of Mpox in a 33-year-old HIV-positive gentleman, the fourth case in Pakistan and the first in Khyber Pakhtunkhwa (KP). Risk factors like age, gender, and unsafe and risky sexual behavior put this patient at risk of Mpox.

KEYWORDS: Monkeypox; Human Immunodeficiency Virus; Disease Outbreak; Pandemic; Epidemic

supportive.⁵ As of September 27 2023, 90618 cases have been reported globally, with 157 deaths.⁶ Pakistan has reported three cases, one from Sindh and two from Islamabad.⁷ This is the fourth case in Pakistan and the first one from Khyber Pakhtunkhwa. We report a case of a 33-year-old HIV-positive gentleman with Mpox.

CASE

A 33-year-old male driver presented with high-grade fever followed by mucocutaneous lesions of different stages on the face, oral cavity, groin, penis, dorsal aspect of both legs and abdomen for the last two weeks. He also complained of malaise, sore throat, and dry cough. He denied any joint swelling, red eyes, or urethral discharge. The lesions started as a maculopapular rash, which evolved into vesicles and pustules over two weeks. Later on, the lesions ulcerated, leading to scab formation. The patient was diagnosed as HIV positive in 2021 and was prescribed antiretroviral therapy. The patient's compliance with the treatment was poor. Moreover, he was vaccinated against measles and tuberculosis in childhood and received influenza and COVID-19 vaccines last year.

He was not vaccinated against smallpox. The patient worked as a driver abroad. He is married with three kids. He is addicted to snuff and is an occasional smoker. He denied alcohol and illicit drug use. He disclosed promiscuous sexual relationships, having multiple sexual partners, including rare unprotected homosexual encounters. He received initial treatment for the fever and skin lesions in KSA, but due to the progression of the lesions and poor response to treatment, he returned to Pakistan. Examination revealed widespread pustular lesions with scab formation with surrounding erythema and multiple oral ulcers (Figure 1). His temperature was 101F, blood pressure was 120/70 mmHg, and he had bilateral cervical and inguinal lymphadenopathy. The rest of the general physical and systemic examination was unremarkable. He was isolated with high suspicion of contagious viral vesicular/pustular febrile illness. His complete blood count, random blood sugar, liver and renal function, chest x-ray, ECG, and abdominal ultrasound were normal. His Clusters of differentiation 4 (CD4) count was 29 (reference range: 500 – 1500 cells/mm³). Given his history, examination findings, and the current outbreak of Mpx, the lesions were swabbed, and the samples were sent to the provincial public health reference laboratory at Khyber Medical University for Polymerase Chain Reaction (PCR) for Mpx. The PCR was reported positive for Mpx. The case was reported to provincial public health authorities. Considering the mild nature of the disease and the non-availability of Tecovirimat, he was given general supportive treatment. His antiretroviral therapy was reinstated. He was discharged and advised to isolate at home till complete clearance of all the lesions.



Figure 1: Photographs of the patient showing crusted pustules on the nose and face surrounded by erythema (A), multiple oral ulcers (B), crusted pustules on the leg (C), and ulcerated pustules on the finger (D).

DISCUSSION

Till May 2022, Mpx remained restricted to its endemic regions of central and western Africa. An outbreak of Mpx was reported from 115 countries across all six areas of the WHO in May 2022.² It may be due to diminishing immunity against the closely related smallpox virus, changing characteristics of the monkeypox virus itself, and shifts in human sexual behaviour. The WHO declared Mpx as "an evolving threat of moderate public health concern" on June 23, 2022.³ Most of the patients in the current outbreak are male homosexual/bisexual who had multiple sexual encounters. International travel poses a significant threat to regions outside the endemic zones. Pakistan reported its first case of Mpx in April 2023 in a patient who also returned from the KSA to Islamabad.⁷ The indexed case was unique because it is the first case in Khyber Pakhtunkhwa province of Pakistan. The patient remained in Saudi Arabia, a country known for its very conservative societal norms and strict regulations for pre-employment screening of infectious diseases like tuberculosis, viral hepatitis, and HIV. The patient travelled to Pakistan amidst the ongoing COVID-19 pandemic and an extensive outbreak of Mpx. He passed unchecked through all the pandemic watchdogs and travel barriers. In a case series of 528 infected cases, 98% of patients with Mpx were gay/bisexual men with a median age of 38 years. Rash (95%), fever (62%), lymphadenopathy (56%), and mucosal lesions (41%) were the standard presenting features of Mpx.² The risk factors like age, gender, sexual behaviour, and the clinical presentation of Mpx in this case are consistent with local and international findings. Moreover, he had Mpx on the background of Acquired Immune Deficiency Syndrome (AIDS). Although the natural course of Mpx is that of a mild illness in most patients, immunosuppression is associated with a worse outcome. A study of HIV patients with Mpx found that 28% needed hospitalization, and all 27 deaths occurred in patients with CD4 counts less than 200 cells/mm³. Although one-fourth of patients with Mpx and HIV co-infection may develop immune reconstitution inflammatory syndrome (IRIS) following the introduction of antiretroviral therapy (ART), it is still recommended to start them on ART.⁸ HIV and Mpx co-infection could increase the transmission of both infections. The co-infection could alter the usual presentation of Mpx and may deceive and mislead the attending physician. Moreover, the presence of co-infection could set the ground for viral mutations. The

nexus of both viruses calls for vigilant monitoring. This is the first case of Mpox from the Khyber Pakhtunkhwa province of Pakistan. Since this case report involves only one patient observed for a short duration, this may not reflect the entire range of risk factors, clinical features, and complications of Mpox. More extensive studies with longer follow-ups are needed locally to determine the overall spectrum of Mpox.

CONCLUSIONS

This case report highlights the vulnerability of various national and international checkpoints to stop someone with such an infectious disease. This calls for stricter measures at the points of entry and closer international collaboration to avert yet another pandemic after COVID-19. Furthermore, physicians should be vigilant for rare and uncommon diseases, as zebra diagnosis exists. A vesicular rash's appearance should alert one to think about alternative rare disorders and initiate treatment and public health measures.

ACKNOWLEDGMENTS:

We acknowledge the support of Prof. Mohammad Noor, Prof. Said Amin, and Assoc. Prof. Fawad Rahim (Medical A Unit, Hayatabad Medical Complex, Peshawar) for their supervision. We acknowledge Assoc. Prof. Abdur Rahim Khan (Department of Dermatology, Khyber Girls Medical College, Peshawar) for his valuable input. We acknowledge the help of Dr. Asad Zia (Khyber Medical University, Peshawar) in arranging the diagnostic tests for Mpox.

CONFLICT OF INTEREST: None

FUNDING SOURCES: None

REFERENCES

1. World Health Organization. Mpox (monkeypox). Published 2023. Accessed October 8, 2023. <https://www.who.int/news-room/fact-sheets/detail/monkeypox>
2. Thornhill JP, Barkati S, Walmsley S, Rockstroh J, Antinori A, Harrison LB, et al. Monkeypox Virus Infection in Humans across 16 Countries - April-June 2022. *N Engl J Med*. 2022;387(8):679-691.
3. Taylor L. Monkeypox: WHO declares a public health emergency of international concern. *BMJ*. 2022;378:o1874.
4. Centers for Disease Control and Prevention. Mpox: How it spreads. Published 2023. Accessed October 8, 2023. <https://www.cdc.gov/poxvirus/Mpox/if-sick/transmission.html>
5. Gessain A, Nakoune E, Yazdanpanah Y. Monkeypox. *N Engl J Med*. 2022;387(19):1783-1793.
6. World Health Organization. 2022-23 Mpox (Monkeypox) Outbreak: Global Trends. Published 2023. Accessed September 28, 2023. https://worldhealthorg.shinyapps.io/mpx_global/
7. Abid Hussain. Pakistan confirms its first case of Mpox. Published 2023. Accessed September 28, 2023. <https://www.aljazeera.com/news/2023/4/26/pakistan-confirms-its-first-case-of-Mpox>
8. Mitjà O, Alemany A, Marks M, Lezama Mora JI, Rodríguez-Aldama JC, Torres Silva MS, et al. Mpox in people with advanced HIV infection: a global case series. *Lancet (London, England)*. 2023;401(10380):939-949.

CONTRIBUTORS

1. **Muhammad Tabish Ikram** - Concept & Design; Data Acquisition; Drafting Manuscript; Critical Revision; Supervision; Final Approval
2. **Faisal Hassan** - Data Acquisition; Data Analysis/Interpretation; Drafting Manuscript; Critical Revision; Final Approval
3. **Muhammad Irfan** - Data Acquisition; Data Analysis/Interpretation; Drafting Manuscript; Critical Revision; Final Approval
4. **Faryal Miraj** - Data Acquisition; Drafting Manuscript; Critical Revision; Final Approval
5. **Yasir Ali** - Data Acquisition; Drafting Manuscript; Critical Revision; Final Approval
6. **Shah Fiaz** - Data Acquisition; Data Analysis/Interpretation; Drafting Manuscript; Critical Revision; Final Approval



LICENSE: JGMDS publishes its articles under a Creative Commons Attribution Non-Commercial Share-Alike license (CC-BY-NC-SA 4.0).
 COPYRIGHTS: Authors retain the rights without any restrictions to freely download, print, share and disseminate the article for any lawful purpose.
 It includes scholarly networks such as Research Gate, Google Scholar, LinkedIn, Academia.edu, Twitter, and other academic or professional networking sites.