

New Threat at Doorstep: What an Intensivist should Know

Akshaya Kumar Das¹, Ankur Sharma², Sandeep Kumar³, Shilpa Goyal⁴, Nikhil Kothari⁵

Received on: 10 August 2022; Accepted on: 19 August 2022; Published on: 30 September 2022

Keywords: Intensivist, Monkeypox, Virus.

Indian Journal of Critical Care Medicine (2022): 10.5005/jp-journals-10071-24328

After the coronavirus disease-2019 (COVID-19) pandemic, monkeypox is slowly becoming a new global health terror. Monkeypox virus, which belongs to the Orthopoxvirus genus and Poxviridae family, causes a disease that has symptoms similar to the smallpox disease but in a less severe form. "Monkeypox" is a misnomer because this disease is not transmitted by monkeys, the name might be derived from the first cases identified by laboratory monkeys in Copenhagen, Denmark, in 1952.¹

From an endemic disease in western and central Africa, now monkeypox infection is spreading like a forest fire and crossing the boundaries of the continent. There are two clades, the western African clade with a lesser case fatality ratio than the Congo basin clade.²

There is a rapid rise in monkeypox cases from 42 cases in January 2022 to 18095 laboratory-confirmed cases reported from 75 countries till 25th July, 2022. The reported cases this time had no epidemiological link of travel to monkeypox endemic areas of Africa and predominance of sexual contact as the transmission route.

In the Indian scenario, there are four confirmed cases of monkeypox (three from Kerala and one from Delhi) till now. The first confirmed case, identified from Kerala, had returned from United Arab Emirates (UAE) on 12th July 2022, and two other cases were then identified in Kerala. On 24th July 2022, the fourth case was detected in Delhi in a young man with no recent travel history.

The symptoms include fever, headache, prostration, myalgia, chills, and an atypical rash commonly seen in the genital region or anal area and spreading to the palms, soles, and chest with different stages of development.

The natural reservoir of the monkeypox is still unknown. In 2003, there was an outbreak of monkeypox from domestic prairie dogs in Ghana, which later spread to different areas of the United States with 81 confirmed cases but without any mortality.³ The monkeypox virus is transmitted when there is close contact with the infected animal, human, or fomites through the respiratory tract, mucus membrane, and when there is a breach in the skin. Most human-to-human transmission occurs via respiratory droplets and other modes of spreading through direct contact with body fluids, lesions, and used clothes. There are reported cases of monkeypox but not exclusive to gays, bisexuals, and men who have sex with men at sexual health clinics in the present epidemic.⁴

Most of the symptoms of monkeypox are self-limiting, but in a minor proportion of cases, patients develop a secondary bacterial infection, pneumonia, central nervous-system infection, etc., and may need intensive care admission. Monkeypox has to be differentiated from other diseases like varicella-zoster, measles, infectious mononucleosis, molluscum contagiosum, and

^{1,3-5}Department of Anaesthesia and Critical Care, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India

²Department of Trauma and Emergency (Anaesthesia and Critical Care), All India Institute of Medical Sciences, Jodhpur, Rajasthan, India

Corresponding Author: Ankur Sharma, Department of Trauma and Emergency (Anaesthesia and Critical Care), All India Institute of Medical Sciences, Jodhpur, Rajasthan, India, Phone: +91 9654045653, e-mail: ankuranaesthesia@gmail.com

How to cite this article: Das AK, Sharma A, Kumar S, Goyal S, Kothari N. New Threat at Doorstep: What an Intensivist should Know. *Indian J Crit Care Med* 2022;26(10):1076–1077.

Source of support: Nil

Conflict of interest: None

other sexually transmitted diseases. There may be a diagnostic dilemma between chickenpox and monkeypox viral infection. Monkeypox could be differentiated from chickenpox as the typical rash in monkeypox involves the palm and sole and has a more lethal and longer disease course than chickenpox.

The intensivist should be aware of the potential implications of monkeypox on critical care management.

The following issues are highlighted:

- Most of the patients with mild disease do not need any specific therapy.
- Antiviral therapy is generally indicated in patients with young age, pregnancy, immunocompromised state like advanced human immunodeficiency virus infection, malignancy, chemotherapy, high-dose corticosteroids, and patients with organ impairment. At present, we have a few antiviral options for monkeypox treatment, i.e., Tecovirimat, Cidofovir/Brincidofovir, and Trifluorodine topical formulation.⁵
- As per the World Health Organization, current risk for the general population is very low, but the disease severity could be higher with greater mortality in immunocompromised hosts like patients with actively acquired immunodeficiency syndrome. The patient could develop pneumonia with secondary bacterial infection, acute respiratory distress syndrome, and sepsis with multiorgan failure.
- A confirmed or suspected case of monkeypox should be isolated in the intensive care unit with the use of personal protective equipment by the healthcare staff with proper disposal of body fluid, secretions, etc.
- Monkeypox is different from COVID-19 in that it spreads very slowly compared with COVID-19 and does not spread through the air.

ORCID

Akshaya Kumar Das  <https://orcid.org/0000-0003-1047-1474>

Ankur Sharma  <https://orcid.org/0000-0001-9339-6988>

Sandeep Kumar  <https://orcid.org/0000-0001-7641-8807>

Shilpa Goyal  <https://orcid.org/0000-0002-8983-0953>

Nikhil Kothari  <https://orcid.org/0000-0002-9829-905X>

REFERENCES

1. Parker S, Buller RM. A review of experimental and natural infections of animals with monkeypox virus between 1958 and 2012. *Future Virol* 2013;8(2):129–157. DOI: 10.2217/fvl.12.130.
2. Multi-country monkeypox outbreak in non-endemic countries. WHO 2022 [cited 27 July, 2022]. Available from: <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON385>.
3. Bernard SM, Anderson SA. Qualitative assessment of risk for monkeypox associated with domestic trade in certain animal species, United States. *Emerg Infect Dis* 2006;12:1827–1833. DOI: 10.3201/eid1212.060454.
4. Monkeypox: Public health advice for gay, bisexual and other men who have sex with men. WHO 2022 [cited 27 July, 2022]. Available from: <https://www.who.int/news/item/25-05-2022-monkeypox-public-health-advice-for-gay-bisexual-and-other-men-who-have-sex-with-men>.
5. Monkeypox treatment. [niaid.nih.gov](https://www.niaid.nih.gov/diseases-conditions/monkeypox-treatment). 2022 [cited 27 July, 2022]. Available from: <https://www.niaid.nih.gov/diseases-conditions/monkeypox-treatment>.