

EDITORIAL

MONKEYPOX —A LOOMING HEALTH CRISIS FOR THE WORLD

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Monkeypox is similar to Small Pox but it is less severe and less infectious than the small pox. Smallpox vaccination was approximately 85% protective against monkeypox. Ninety-two confirmed cases and twenty-eight suspected cases of Monkeyvirus were reported to World Health Organization between 13 to 21 May 2022 in 12 non-endemic countries in Europe, the United States, and the United Kingdom. Monkeypox is still a serious illness because of its complications, from the effects of sepsis and encephalitis to blindness from eye infections; nearly one in ten people infected are at risk of fatal complications, especially among young children. There is no diagnostic facility available in Pakistan. Health professionals should rely on their clinical skills to diagnose monkeypox. Flu-like symptoms are common initially, ranging from fever and headache to shortness of breath. One to 10 days later, a rash can appear on the extremities, head or torso that eventually turns into blisters filled with pus. Monkeypox produces smallpox-like skin lesions. Macules leading to Papules, Vesicles, Pustules, Scabs, Rash resolved in 14 to 21 days. An antiviral agent known as Tecovirimat is licensed by the European Medical Association (EMA) for monkeypox in 2022.

Keywords: Monkeypox, non-endemic spread, Tecovirimat

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Like COVID-19, monkeypox is a viral disease but it is threatening because it is spreading outside its endemic areas. Monkeypox is similar to smallpox but it is less severe and less infectious than the smallpox. In light of monkeypox cases spreading across Europe, the United States, and the United Kingdom, Pakistan's top health body Monday, May 23, 2022, issued an alert regarding the virus. National Institute of Health (NIH), Pakistan puts federal and provincial health officials on high alert. Instructions have been issued to monitor passengers at airports and other entrances. Medical staff is advised to be careful around monkeypox patients.¹

Historical data have indicated that smallpox vaccination with vaccinia virus (another orthopoxvirus) was approximately 85% protective against monkeypox. However, following the eradication of smallpox in 1980, routine vaccination against smallpox was no longer indicated, and it has now been four decades since any orthopoxvirus vaccination program.²

Twelve non-endemic countries reported to WHO (between 13 to 21 May 2022) 92 confirmed cases and 28 suspected cases of monkeyvirus. Monkeypox is a viral zoonosis (a virus transmitted to humans from animals) with symptoms very similar to those seen in the past in smallpox patients, although it is clinically less severe. It is caused by the monkeypox virus which belongs to the *orthopoxvirus* genus of the *Poxviridae* family. There are two clades of monkeypox virus: the West African clade and the Congo Basin (Central African) clade. The name monkeypox originates from the initial discovery of the virus in monkeys in a Danish laboratory in 1958. The first human case was identified in a child in the Democratic Republic of Congo in 1970. Monkeypox is usually self-limiting but may be severe in

some individuals such as children, pregnant women, or persons with immune suppression due to other health conditions. Human infections with the West African clade appear to cause less severe disease compared to the Congo Basin clade, with a case fatality rate of 3.6% compared to 10.6% for the Congo Basin clade.³

Nonetheless, monkeypox is still seen as a serious illness that carries a risk of ongoing complications, from the effects of sepsis and encephalitis to blindness from eye infections. Without medical treatment or vaccination, nearly one in ten people infected are at risk of fatal complications, especially among young children. Compared with the horrors of smallpox, which at its peak claimed nearly one out of every three infected, monkeypox might not seem that bad. But if we've learned anything from the COVID-19 pandemic, it's better to be safe than sorry when it comes to potentially deadly viruses.⁴

A definitive diagnosis is accomplished via polymerase chain reaction (PCR) testing of skin lesions or fluid. Although Federal Ministry of Health and National Institute of Health refute reports of suspected cases of monkeypox in Pakistan, the officials of the federal health ministry said that currently there is no facility of diagnostic tests for the virus is present in the country.⁵ So, health professionals should rely on their clinical skills to diagnose monkeypox cases. History of travel from the endemic areas or from the countries now infected is important. The virus can be transmitted through contact with an infected person or animal or contaminated surfaces. Researchers believe that human-to-human transmission is mostly through inhalation of large respiratory droplets rather than direct contact with bodily fluids or indirect contact through clothes.



Monkeypox Skin Lesions

Typically, the virus enters the body through broken skin, inhalation, or the mucous membranes in the eyes, nose or mouth. After the virus enters the body, it starts to replicate and spread through the body via the bloodstream. Symptoms usually don't appear until one to two weeks after infection. Monkeypox produces smallpox-like skin lesions, but symptoms are usually milder than those of smallpox. Flu-like symptoms are common initially, ranging from fever and headache to shortness of breath. One to 10 days later, a rash can appear on the extremities, head or torso that eventually turns into blisters filled with pus. Overall, symptoms usually last for 2 to 4 weeks, while skin lesions usually scab over in 14 to 21 days.⁵ Lymphadenopathy is a distinguishing feature of monkeypox from smallpox. Enanthem—the first lesions to develop are on the tongue and in the mouth. Macules develop after 1–2 days, Papules in next 1–2 days, Vesicles in another 1–2 days, and Pustules in next 5–7 days. Scabs remain for the next 7–14 days and then the Rash is resolved. Pitted scars and/or areas of lighter or darker skin may remain after scabs have fallen off. Once all scabs have fallen off a person is no longer contagious.⁷

According to the World Health Organization, clinical care for monkeypox should be to alleviate symptoms, manage complications, and prevent long-term sequelae. Adequate nutritional status can be maintained throughout consumption of fluids and

healthy food. An antiviral agent known as Tecovirimat that was developed for smallpox was licensed by the European Medical Association (EMA) for monkeypox in 2022. However, Tecovirimat is not yet widely available. A monkeypox outbreak can be controlled with the help of smallpox vaccine, Cidofovir, Tecovirimat (ST-246) and Vaccinia Immune Globulin (VIG).⁸ Probably none of these treatments are available in Pakistan.

REFERENCES

1. <https://www.geo.tv/latest/418482-national-institute-of-health-issues-alert-regarding-monkeypox> [Accessed on 25-05-2022]
2. Bunge EM, Hoet B, Chen L, Lienert F, Weidenthaler H, Baer LR, Steffen R. The changing epidemiology of human monkeypox —A potential threat? A systematic review. <https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0010141> [Accessed on 26-05-2022]
3. <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON385> [Accessed on 23-05-2022]
4. <https://www.sciencealert.com/what-is-monkeypox-and-could-it-become-the-next-pandemic> accessed on 26-05-2022
5. <https://www.geo.tv/latest/418686-no-diagnostic-testing-facility-available-for-monkeypox-in-pakistan-health-ministry> [Accessed on 26-05-2022]
6. <https://www.sciencealert.com/a-microbiologists-explains-what-you-need-to-know-about-monkeypox> [Accessed on 26-05-2022]
7. <https://www.cdc.gov/poxvirus/monkeypox/clinicians/clinical-recognition.html> [Accessed on 23-05-2022]
8. <https://news.abplive.com/health/explained-how-can-monkeypox-be-treated-list-of-vaccines-and-therapeutics-available-1533442> [Accessed on 26-05-2022]

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