



## Monkey Pox- The Next Pandemic?- An Overview

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### Abstract

Monkey pox is ds-DNA viral zoonosis similar to small pox which is capable of human transmission. It is endemic in Western Africa, However recently there is an outbreak in non-endemic areas which is a matter of concern as it has the ability to emerge into a pandemic. There are no reported cases in India yet however India has all favourable conditions for its spread. The pathophysiology, changing genomics, treatment modalities and vaccines are yet to be studied in detail. Prevention is currently the best strategy.

**Keywords:** NIL

### Introduction

The world has recently seen a pandemic of COVID-19 which had very high mortality and also had a huge impact on the health care infrastructure as well as global economy<sup>[7]</sup>. As we are slowly progressing to the pre-pandemic era, there have been case reports of rising incidence of monkey pox infection which has been reported in over 12 countries and the WHO has laid guidelines and labeled it as a notifiable disease on May, 22, 2020<sup>[5]</sup>.

### What is Monkey Pox?

Monkeypox virus is an enveloped double-stranded DNA virus that belongs to the Orthopoxvirus genus. It has two distinct genetic variants historically one is found in the Congo Basin and One in the Cameroon region. It is viral zoonosis which is transmitted when there is contact with the body fluids or infected lesions or tissues of the infected animals mainly tree squirrels, rats and various species of monkeys. Human to Human transmission can also occur through respiratory droplet route and also contact with bodily fluids and infected lesions<sup>[1]</sup>

The incubation period is about 7-14 days and the clinical features resemble small pox. The clinical course can be divided into two period, the invasive

period and eruptive period. The invasive period, the initial five days is characterized by fever, myalgia, asthenia and lymphadenopathy which distinguishes it from small pox and chicken pox. This is followed skin eruption which starts about 3 days post the fever starts. Skin lesions include macules, papules, vesicles and pustules which crust and fall off<sup>[4]</sup> Complications of monkeypox can include secondary infections, bronchopneumonia, sepsis, encephalitis. The diagnostic test of choice is PCR detection and serology tests are not recommended due to cross reactivity. There is no specific treatment for the infection other than supportive care. There is evidence that the vaccine for small pox has about 85% efficacy against the infection and a prior small pox infection is also protective.<sup>[6]</sup>

### History

The first case of human monkey pox has been reported in 1970. The disease was then reported in several countries of West Africa where it is endemic. The case fatality rate of the disease is about 3-10% and the rate is higher in young children. In 2003 there were reports of Monkey Pox being reported outside the endemic areas in USA where there was an outbreak leading to 47 reported cases which were

attributed to contact which animals which were imported from West Africa. However the cases were mild and no deaths were reported. However there were cases which were being continuously reported from the West African countries. <sup>[2]</sup>

### Current Scenario

Recently there is an increase in the incidence of monkey pox cases. The cases are being reported from non-endemic countries where previously no cases have been reported. The cases reported had no travel links or established contacts with endemic areas. The cases being reported are rising and WHO has issued guidelines when to suspect, detect, and reporting of confirming cases which are to be strictly followed. <sup>[3]</sup>

### India's Situation

There are no reported cases in India as of today. As seen in the previous pandemics, it is very easy in India for any infection to spread rapidly due to its population density. Monkey pox if detected in India has high propensity to spread rapidly as it is difficult to isolate all confirmed cases and their contacts, ensure proper contact tracing, limited resources, lack of strict hygiene, the use of masks and hand sanitization which were mandatory earlier have now taken a back seat due to relaxed regulations and people slowly moving back to the pre COVID-era. The Indian government has already issued guidelines regarding the same and started education the public.

### Conclusion

Monkey pox is a viral Zoonosis with human to human transmission and has a capacity to emerge into a pandemic as it is very similar to small pox. Though there are no cases reported in India yet, we have to use all precautions to prevent its spread using masks, sanitization avoiding large gatherings due to its conducive environment. However, there is a requirement of large scale studies to study it

pathophysiology, lay down the treatment guidelines, and develop vaccines against it.

### References

1. Foster SO, Brink EW, Hutchins DL, et al. Human monkeypox. Bull World Health Organ. 1972;46(5):569-576.
2. Skelnovska N, Ranst MV. Emergence of Monkeypox as the Most Important Orthopoxvirus Infection in Humans. Frontiers in Public Health. 2018;6
3. World Health Organization Multi-country monkeypox outbreak in non-endemic countries. [internet] Last Updated on 2022 21 May; Available from: <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON385>
4. World Health Organization- Monkey Pox [internet] Last Updated on 2022 May 19; Available from : <https://www.who.int/news-room/fact-sheets/detail/monkeypox>
5. World Health Organization -Surveillance, case investigation and contact tracing for Monkeypox- Interim guidance. [internet] Last Updated on 2022 May 22; Available from : <https://www.who.int/publications/i/item/WHO-MPX-surveillance-2022.1>
6. Centres for Disease Control and Prevention - Monkey Pox [internet] Last Updated 2022 May 20; Available from: <https://www.cdc.gov/poxvirus/monkeypox/index.html>
7. Amarnath A., Das A., Mutya VSS, Ibrahim IK. The Effect of baricitinib usage on the clinical and biochemical profiles of COVID-19 patients- a retrospective observational study BMJ medRxiv 2021 Aug 11: 21261760