

Rise & Emergence of New & Old Microbes -Monkey Pox a new threat to Humanity ?

When the world thought everything is back to Normal and we are still recovering from the aftermath of COVID-19 emerges Monkey Pox . Monkey Pox resembles Small Pox not only in name but also similar in symptoms but in humans monkey pox is less severe & contagious than small pox. Small Pox was eradicated in the year 1980.

Presently at least 19 countries, outside of the endemic areas, have reported cases of MonkeyPox.

The name Monkey Pox originates from the initial discovery of the virus in monkeys in a Danish laboratory in 1958. The first human case was identified in a 9 year old child in the Democratic Republic of the Congo in 1970.

What is Monkey Pox ?

Monkeypox is a viral zoonosis (a virus transmitted to humans from animals) caused by the *orthopoxvirus* genus of the *Poxviridae* family. This virus usually circulates among Rodents.

Endemicity: This Disease is endemic in tropical rainforest areas of Central and West Africa , usually less transmissible . Monkeypox endemic countries are: Benin, Cameroon, the Central African Republic, the Democratic Republic of the Congo, Gabon, Ghana (identified in animals only), Côte d'Ivoire, Liberia, Nigeria, the Republic of the Congo, and Sierra Leone. Benin and South Sudan have documented importations in the past.

How is it transmitted?

Transmission of monkeypox virus occurs when a person comes into contact with the virus from an animal, human, or materials contaminated with the virus. The virus enters the body through broken skin (even if not visible), respiratory tract, or the mucous membranes (eyes, nose, or mouth). Animal-to-human transmission may occur by bite or scratch, bush meat preparation, direct contact with body fluids or lesion material, or indirect contact with lesion material, such as through contaminated bedding.

Human-to-human transmission is thought to occur primarily through large respiratory droplets. Other human-to-human methods of transmission include direct contact with body fluids or lesion material, and indirect contact with lesion material, such as through contaminated clothing or linens.

Is Monkey Pox a Sexually Transmitted Disease?

Many diseases can be spread through sexual contact. Ranging from a simple Cough to bacterial or viral illness, but it doesn't mean that it's a sexually transmitted disease. While the virus itself is not a sexually transmitted infection , the most recent surge in cases appears to have been spread among men who have sex with other men. The US CDC & WHO are awaiting more studies on why there is a STI pattern spread in this Disease.

What is the Incubation Period of Monkey pox?

The incubation period of monkeypox is usually from 6 to 13 days but can range from 5 to 21 days.

What are the Symptoms of Monkey pox?

The illness begins with:

- Fever
- Headache
- Muscle aches
- Backache
- Swollen lymph nodes
- Chills
- Exhaustion

Within 1 to 3 days (sometimes longer) after the appearance of fever, the patient develops a rash, often beginning on the face then spreading to other parts of the body.

Lesions progress through the following stages before falling off:

- Macules
- Papules
- Vesicles
- Pustules
- Scabs



Image issued by the UK Health Security Agency of the stages of monkeypox (Credit: UK Health Security Agency/PA)

What are the Complications of Monkey pox?

Complications of Monkeypox can include secondary Infections, Bronchopneumonia, Sepsis, Encephalitis, and Infection of the cornea with ensuing loss of vision.

Can people die from Monkey Pox?

In most cases, the symptoms of monkeypox go away on their own within a few weeks, but in some individuals, they can lead to medical complications and even death.

How is Monkey Pox Different From SmallPox?

The main difference between monkeypox and smallpox is that apart from the flu like symptoms, monkeypox causes enlargement of lymph nodes or glands, which are there in the body, which helps us differentiate between the two.

How is Monkey Pox diagnosed?

Monkey Pox is diagnosed by detection of unique sequences of viral DNA in skin lesions either by real-time polymerase chain reaction (PCR) and/or sequencing. PCR by blood is usually inconclusive.

What are the Preventive Measures to observe for Monkey Pox?

There are number of measures that can be taken to prevent infection with Monkey Pox virus:

- Avoid contact with animals that could harbor the virus (including animals that are sick or that have been found dead in areas where Monkey Pox occurs).
- Avoid contact with any materials, such as bedding, that has been in contact with a sick animal.
- Avoid travel to Endemic areas.
- Avoid eating exotic meat which can harbor this virus , all other meat products have to be cooked thoroughly before consumption .
- Wear a mask in all public places , Maintain social distancing.
- Isolate infected patients from others who could be at risk for infection.
- Practice good hand hygiene after contact with infected animals or humans. For example, washing your hands with soap and water or using an alcohol-based hand sanitizer.
- Use personal protective equipment (PPE) when caring for patients.

Is the Vaccine for Monkey Pox and Smallpox Similar?

JYNNEOS (Imvamune or Imvanex) is an attenuated live virus vaccine which has been approved by the U.S. Food and Drug Administration for the prevention of monkeypox. It is administered as two subcutaneous injections four weeks apart.

Because monkeypox virus is closely related to the virus that causes smallpox, the smallpox vaccine can protect people from getting Monkeypox. Clinical Study From Africa suggests that this vaccine is 85% effective against Monkeypox.

Is Vaccination after Exposure to Monkey Pox possible?

Vaccination after exposure to Monkey Pox virus is still possible. However, the sooner an exposed person gets the vaccine, the better.

The US CDC recommends that the vaccine be given within 4 days from the date of exposure in order to prevent onset of the disease. If given between 4–14 days after the date of exposure, vaccination may reduce the symptoms of disease, but may not prevent the disease.

Dr Jibin John Thomas

Registrar , Internal Medicine

International Clinic