



Review Article

Human Monkeypox's Evolving Epidemiology: Is it a Threat?

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ARTICLE INFO

Key Words:

Monkeypox, Outbreak, Public health, Infectious Disease, Vaccination

How to cite:

Hassan, F. ., Amjed Ismail, M. ., & Khan Niazi, M. . (2022). Human monkeypox's Evolving Epidemiology: Is it a Threat? Human Monkeypox and Evolving Epidemiology. MARKHOR (The Journal of Zoology), 3(02).
<https://doi.org/10.54393/mjz.v3i02.49>

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Received Date: 12th November, 2022

Acceptance Date: 27th December, 2022

Published Date: 31st December, 2022

ABSTRACT

Monkeypox is a rare zoonotic disease that is caused by the monkeypox virus, a member of the Poxviridae family. Avoid close contact with animals, whether they are living or dead, especially in endemic areas where this could be a source of infection transmission to healthy people. Separate sick people from those who might be contaminated. Frontline medical staff should be instructed and trained to rigorously adhere to traditional safety practices when dealing with verified or suspected cases. At the nation's entry and exit points, vaccination booths should be placed in order to stop the global spread of this contagious disease. Through extensive public awareness initiatives, people should be informed about sickness prevention, risk factors, and treatments. The public health departments of every nation should be alert for any signs that someone may be suffering from an unusual rash.

INTRODUCTION

Global migration creates new infectious disease risks. Stronger forceful action is needed, yet repeated requests go unmet. The monkeypox virus (seen in figure 1) is what causes monkeypox, a rare zoonotic disease [1, 2]. Monkeypox and smallpox viruses are connected. In the past, it was discovered that smallpox immunization with the vaccinia virus provided about 85% protection against monkeypox [3]. Routine immunization against smallpox was no longer recommended after it was eradicated in 1980, and an orthopoxvirus vaccine program has not been launched in nearly 40 years [4].

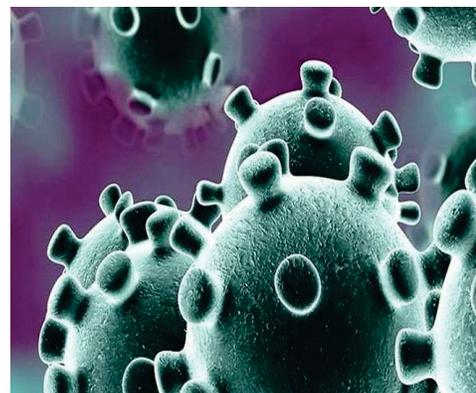


Figure 1: Monkeypox virus structure

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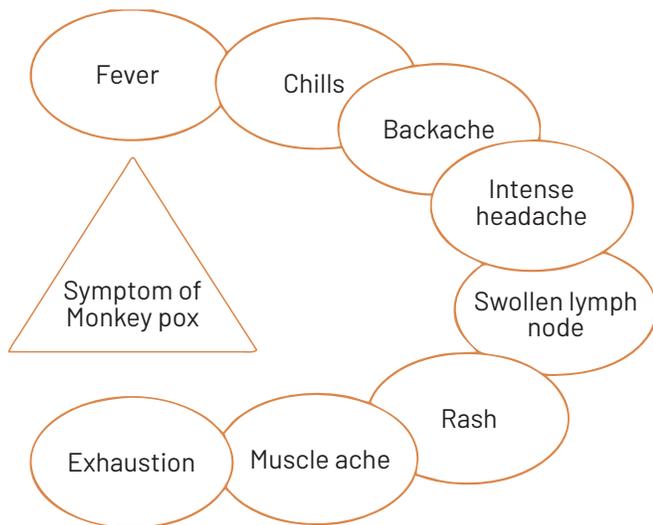


Figure 2: Symptoms of Monkeypox virus

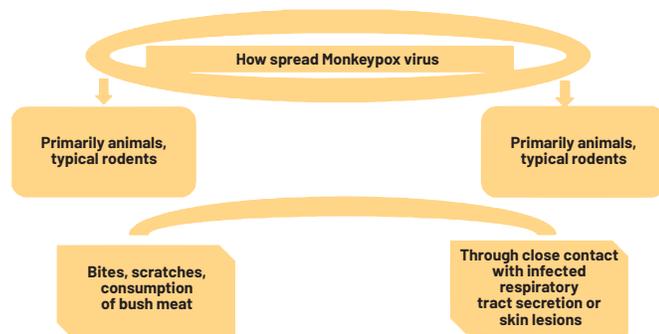


Figure 3: Transmission of Monkeypox virus

International public authorities have once again been aware of a number of bizarre and unplanned outbreaks and clusters of cases of human monkeypox since May 7, 2022, across the Americas, Europe, and Australia [10]. The initial instance of monkey pox On May 7, the UK Health Security Agency disclosed that it has connections to Nigeria relating to travel [11]. On May 14th, UK, local authorities uncovered two additional occurrences. Monkeypox cases have been routinely reported to WHO by 12 member states across three WHO regions. The WHO said that as of May 21, 2022, there were 92 laboratory-confirmed cases of monkeypox reported from the UK, US, Germany, France, Belgium, Canada, Spain, Portugal, Sweden, Italy, and Australia, and 28 suspected cases [12]. More cases are

anticipated to be identified. Thankfully, no fatalities have been recorded so far. But despite several odd, bizarre, and perplexing aspects of these epidemics, important social and public health concerns are being raised [13]. From a scientific, environmental, and social perspective, the primary causes of this tremendous development are still unknown, and they must be clarified as soon as possible through a coordinated, global One Health plan [14]. Second, there are no clear travel connections between the patients and regions in Africa where monkeypox is endemic, which makes it rare and concerning [15]. Third, it is unclear whether these occurrences are the result of modified monkeypox virus transmission properties or from enhanced virulence. The monkeypox virus's enormous DNA size makes it more resilient and effective than RNA viruses at identifying and undoing alterations. It's improbable that as a result, the virus has evolved to spread to humans more swiftly. Monkeypox clades from West Africa had a milder sickness and a lower mortality rate than clades from Central Africa, according to preliminary genome sequencing research [16]. Fourth, the majority of cases of monkeypox are caused by men who have intercourse with other men, and in some cases in Europe, bisexual men who recently attended festivals as well as homosexual have been linked to the disease. In order to ascertain whether monkeypox is sexually transmitted, more research must be conducted in every region. Any group that interacts closely throughout the course of protracted meetings is susceptible to viral infection clusters [17]. The extensive social media reporting and public about monkeypox outbreak in various contexts has produced excitement in a number of ways that aggravate stigma by either tacitly reinforcing homophobic and racial stereotypes or explicitly doing so. This is done through the use of language, dialogue, and content [18]. This is disgusting because it is unfair, stigmatizing, and discriminating [19]. HIV/AIDS outbreak responses have been proven to be hampered by stigma and blame, underscoring the critical need for both community-led epidemic prevention programs and stigma-free, human rights-based outbreak responses. Fifth, The monkeypox outbreaks highlighted the need for a more coordinated approach to epidemic preparedness by exposing important gaps in our understanding of viral transmission dynamics and the disease's continuously changing epidemiological characteristics. Men between the ages of 20 and 50 make up the majority of those affected by this outbreak of monkeypox [20]. because they were not immunized against smallpox. Sixth, there is a panic among the scientific community, the government, and the general public due to the monkeypox swift spread in the Europe. The rapid-fire nature of events, higher case identification rates, and the collection of dynamic real-

time information from worldwide public health sources have all contributed to a rise in public anxiety. In order to stop the spread of monkeypox, two-way communication about the disease's hazards is essential. Participation of the community in diagnosis, treatment, and prevention is also crucial [18]. Rodents or infected people in the wild can spread the monkeypox virus to humans. The few cases that have been documented outside of Africa have been connected to travel to the region or run-ins with imported rats that are contaminated. Exposure to rats may have contributed to the present spike in human monkeypox infections in Nigeria. In UK instances of monkeypox with a history of travel to Africa during the lockdown periods of COVID-19, rats may have had a similar role to play. International tourists may be impacted by these resulting epidemiological cycles related to person to person transmission [21]. The main objectives in the current outbreak should be to stop the spread of monkeypox and to protect frontline healthcare personnel as well as those who are in danger globally. The alarming increase in instances of monkeypox serves as a reminder of the urgent need for effective vaccinations. Effective competence at the source is required in order to appropriately prepare for and monitor zoonotic dangers to the security of global health.

CONCLUSIONS

Monkeypox requires extra attention since because it is a common disease. MPX is the most common orthopoxvirus in humans, at least in areas where it is endemic and maybe worldwide. In order to prevent increased transmission effectiveness or pathogenicity, adequate and efficient medicines as well as active surveillance techniques are urgently required.

Conflicts of Interest

The authors declare no conflict of interest

Source of Funding

The author(s) received no financial support for the research, authorship and/or publication of this article

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