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Commentary

Monkeypox chronicles: Understanding the origins and spread of the infection

Olina Margret*

Department of Infectious Diseases, Amur State University, Blagoveshchensk, Russia.

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DESCRIPTION

Monkeypox, a rare viral disease that shares similarities with smallpox, has emerged as a concerning health threat, with sporadic outbreaks reported in certain regions. This zoonotic disease is caused by the monkeypox virus, which belongs to the Orthopoxvirus genus. While monkeypox is primarily found in remote parts of Central and West Africa, recent cases beyond these regions have raised global awareness about the potential for its spread and the need for vigilance in monitoring and controlling outbreaks.

Origins and transmission

The monkeypox virus is believed to have originated from animals, with rodents serving as potential reservoir hosts. The virus can be transmitted to humans through direct contact with infected animals or through consumption of undercooked meat. Additionally, human-to-human transmission can occur, particularly through respiratory droplets or contact with skin lesions of infected individuals.

Clinical presentation: The clinical presentation of monkeypox is similar to that of smallpox, albeit less severe. The incubation period is typically 7 to 14 days, after which symptoms may include fever, headache, muscle aches, and exhaustion. A characteristic rash then develops, often beginning on the face and subsequently spreading to other parts of the body. The rash progresses to pustules, which eventually crust over and fall off.

While monkeypox is generally a self-limiting disease, severe cases can occur, especially in individuals with compromised immune systems. Complications may include pneumonia, encephalitis, and in rare instances, death. Differentiating monkeypox from other similar diseases, such as chickenpox or smallpox, requires laboratory testing.

Outbreaks and global concerns: Monkeypox was first identified in 1958 when outbreaks occurred among monkeys kept for research. The first human case was reported in 1970 in the Democratic Republic of the Congo (DRC). Since then, monkeypox outbreaks have been sporadic, mainly in Central and West African countries, including Nigeria, Cameroon, and the DRC.

While historically considered a regional concern, recent years have seen cases of monkeypox reported beyond its traditional geographical boundaries. This has raised concerns about the potential for the virus to spread to new areas, including regions with limited experience in dealing with such outbreaks.

Challenges in diagnosis and surveillance

Diagnosing monkeypox can be challenging, particularly in areas where healthcare infrastructure is limited. The initial symptoms, such as fever and rash, can resemble those of other more common diseases.

Additionally, the virus requires specialized laboratory testing for confirmation, which may not be readily available in all settings. Surveillance is crucial for early detection and containment of monkeypox outbreaks. However, surveillance systems in some regions may not be robust enough to promptly identify and respond to cases. Strengthening healthcare infrastructure, enhancing laboratory capacity, and increasing awareness among healthcare professionals are essential components of effective monkeypox surveillance.

Preventive measures: Preventing monkeypox involves a combination of public health measures and individual actions:

Vaccination: Currently, there is no specific antiviral treatment for monkeypox. However, smallpox vaccination has been shown to be effective in preventing severe cases of monkeypox. The World Health Organization (WHO) recommends considering smallpox vaccination in specific high-risk populations during monkeypox outbreaks.

Animal contact precautions: Avoiding contact with animals that could potentially transmit the virus is crucial. This includes refraining from handling or consuming bush meat and adopting safe practices when caring for sick animals.

Infection control measures: Implementing strict infection control measures in healthcare settings is vital to prevent human-to-human transmission. Isolation of suspected cases, use of personal protective equipment, and thorough hygiene practices can reduce the risk of transmission.

***Corresponding author:** Olina Margret, Email: olinamrgt@bio.vsu.ru

Health education: Raising public awareness about the risks of monkeypox and promoting hygiene practices, especially in communities at high risk, is essential for prevention. This includes educating individuals about the dangers of consuming undercooked meat and the importance of seeking medical attention for unexplained rashes or fevers.

Global collaboration: Given the potential for monkeypox to cross borders and impact regions previously unaffected, global collaboration is crucial in addressing this emerging threat. This involves sharing information, resources, and expertise to enhance surveillance and response capabilities. International organizations, governments, and public health agencies must work together to develop and implement strategies for the prevention and control of monkeypox outbreaks.

Monkeypox represents a complex and evolving challenge in the realm of infectious diseases. While currently confined mainly to certain regions in Africa, the potential for its global spread underscores the need for a proactive and collaborative approach. Strengthening healthcare infrastructure, enhancing surveillance capabilities, and educating communities are essential steps in mitigating the impact of monkeypox outbreaks. By fostering international cooperation and remaining vigilant in the face of emerging threats, the global community can better protect the health and well-being of individuals around the world.