

Monkeypox infection: An emerging zoonotic trouble

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Monkeypox is a zoonotic disease first isolated and identified in 1958 when a group of Danish researchers who fell ill in contact with monkeys shipped from Singapore. [1] Monkeypox virus is a DNA group of viruses belonging to the Poxviridae family [2] divided into two monophyletic biological groups, namely the West African group and the Central African or (Congo basin) group. A high rate of human-to-human transmission, severity, and fatality rate of 11% was found in the patients infected with the Central African group. [3]

The first confirmed human case was in 1970 in a 9-month-old baby boy of Zaire, currently known as the Democratic Republic of the Congo (DRC). [4] Since then, monkeypox has spread over other African countries, and in 2003 cases were reported outside Africa. [CDC, 2022] The variola virus (smallpox virus) resembles monkeypox disease, and vaccination reports with vaccinia virus have a higher protection rate (85%). [5] Smallpox eradication and subsequent lack of vaccination efforts brought monkeypox into the limelight and clinically significant. [6]

Monkeypox infection varies from mild symptoms to serious symptoms. Higher risk groups include pregnant women, children, and immunocompromised individuals. Fever, headache, muscle aches, back pain, tiredness, swollen lymph nodes and rashes for two to three weeks is common amongst infected patients. Rashes are predominantly seen on different areas of the body like the face, palms of the hands, soles of the feet, eyes, mouth, throat, groin, and genitals. Initially, the lesions are flat, gradually filled with liquid, dry up, fall, and a new skin develops beneath it. [7] symptoms usually disappear on their own or with supportive care, such as medication for pain or fever. The newer generation of smallpox vaccines, MVA-BN, is used for Monkeypox. [8]

From the beginning of 2022 till June 15, WHO reported a total of two thousand one hundred and three (2103) confirmed cases of Monkeypox. Even a single confirmed infection in a nonendemic country is considered an outbreak. The Western Pacific, Eastern Mediterranean, Europe, Africa and the Americas confirmed sporadic disease incidents. Gay and bisexual men aged 20-50 years are mostly affected. The United Kingdom reported 524 registered cases, followed by Spain with 313 cases, Germany with 263 cases, Portugal with 241 cases and Canada with 159 cases, respectively. As of July 14, 2022, Singapore reported a total of six cases (three cases are imported, and the other three are local) of monkeypox infections. According to WHO, monkeypox is classed as a moderate health risk due to low death risks and fatality rate. [9-11]

Monkeypox outbreaks should not be taken lightly, considering the current global situation for pandemic threats. Robust surveillance and rapid detection of the infected individuals will help to curb the virus's spread. International health agencies need to work together to do further research on the next level of the Poxviridae family to benefit from the reduced transmission, effective treatment, vaccination, and prevention.

Regards,

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