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Editorial

Monkeypox Outbreak: A Public Health Perspective

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Monkeypox is a viral zoonotic disease belonging to the Orthopoxvirus genus of the Poxviridae family. Most instances of monkeypox are found in central and western Africa, especially close to tropical rainforests. More than 50 nations around the world have reported nearly 3413 confirmed and suspected cases of monkeypox since January 2022 (until 22 June 2022).[1] The central African (Congo Basin) clade and the west African clade are two separate genetic clades of the monkeypox virus. This infection has been detected in a variety of animals, including squirrels and rats that were poached in the Gambia, and many types of monkeys. In the 1970s, the Republic of Congo saw the first human cases. Since then, 11 African nations have recorded human instances of monkeypox. The first outbreak of over 70 cases outside of Africa was recorded in the United States in 2003. Since May 2022, numerous non-endemic nations have reported cases of monkeypox.[2]

Direct contact with body fluids, blood, cutaneous, or mucosal lesions of infected animals can lead to infection in humans. Close contact with skin sores and respiratory secretions of an infected individual, or fomites can all cause human-to-human transmission. The placenta is another route of transmission, from the mother to the foetus. Outbreaks have been identified among men who have sex with men. Case fatality rates for the monkeypox virus are estimated to be between 3 and 6% and the incubation phase may last anywhere between 5 and 21 days.[1,2]

Fever, myalgia, and lymphadenopathy characterise the first prodromal phase (0-5 days), which is followed by the eruptive phase (1-3 days after fever). The rash is more frequently found on the face and limbs, and less commonly on the trunk. The mucous membranes of the mouth, the genitalia, and the eyes might also develop rashes. The rash develops in stages, from macules to papules, vesicles, pustules, and crusts that eventually dry up and flake off. Typically, monkeypox is a self-limiting illness with symptoms that last between two and four weeks. Secondary infections, bronchopneumonia, sepsis, encephalitis, and corneal infections with subsequent vision loss are some of the possible complications of monkeypox.[2]

Diseases like measles, chickenpox, syphilis, scabies, and bacterial skin infections must be taken into account when making a clinical

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differential diagnosis. Given its precision and sensitivity, the polymerase chain reaction is the primary laboratory test. The major goals of care are to reduce symptoms, address problems, and avoid long-term consequences. The European Medicines Agency granted authorisation for tecovirimat, an antiviral medication originally created for smallpox, to treat monkeypox in 2022, although it is not yet publicly accessible. Monkeypox is believed to be prevented by the smallpox vaccine almost 85% of the time. There may be a milder sickness as a result of previous smallpox vaccination. For the protection of monkeypox, a more recent vaccine based on the Ankara strain of the modified attenuated vaccinia virus was authorised in 2019, however, its supplies are extremely scarce.[3,4]

The primary preventative method for monkeypox involves increasing public knowledge of risk factors and teaching individuals the steps they may take to lessen virus exposure. The main risk factor for monkeypox virus infection during human monkeypox epidemics is intimate contact with sick people. The key is efficient contact tracing and patient isolation. The risk of infection is higher for household members and healthcare staff. Caretakers should ideally be people who have already received a smallpox vaccination. It is important to ensure that there is no unprotected contact with wild animals, particularly the ones that are dead or sick, as well as their blood, flesh, and other by-products.[1,2]

As of now, the disease outbreak has affected only a small number of people as compared to COVID, and it may be curbed with quick and efficient public health interventions. Despite the majority of recent cases being minor ailments, the number of deaths might rise if the virus spreads to more susceptible groups (children, pregnant people, and adults with comorbidities). To prevent another virus from endangering population health and adding to the strain on already overburdened healthcare systems, governments must act in tandem.[5]

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