Editorial

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# Monkeypox Outbreaks in Non-Endemic Countries: What Do We Know and What Do We Need?

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Following the news of the outbreak of the monkeypox virus in non-endemic countries from the media, a new wave of concerns was created. The current susceptibility to epidemics has resulted from successive peaks of the whole-society-inclusive coronavirus and its significant mortality and morbidity. To date, on May 28, 2022, there are 401 confirmed and 85 suspected cases worldwide [1], almost all of which are from countries with high-income settings. According to Global.health, 3 suspicious and no confirmed cases have been tracked from Iran.

The human monkeypox is a viral zoonosis from the genus *Orthopoxvirus* in the family Poxviridae that causes flu-like symptoms, including fever, fatigue, and body aches, along with progressive macular-papular, vesicular, pustular, and crusted scab skin lesions that can be itchy [2]. The virus is closely related to the Variola virus, which causes smallpox in humans, but it leads to less severe symptoms and often improves without treatment; however, due to the broad spectrum of the disease severity, it can even be fatal. Previous observations reported fatality rates of 1 to 11%, which appear to be related to the virus clade, patients' age, and concomitant infection with human immunodeficiency virus [2,3].

This disease is not new, and there is good, but not enough, research and background information about it. The source of the current outbreak is unknown, and scientists are looking for reds to explain its outbreak. Transmission of the disease from animals, humans, including nosocomial and household transmission, and fomites is possible [4]. Like many other viral diseases, there is no definitive cure; however, antiviral drugs, like tecovirimat, vaccines, and immunoglobulins are available in developed countries, which help control complications, transmission, and epidemics [5].

The smallpox vaccine is about 85% effective against the monkeypox virus and reduces the frequency and severity of its signs and symptoms. It should be noted that non-elderly people were born after the cessation of smallpox vaccination [3,6], and this may justify the storage of vaccines by developed countries. Scientists have previously reported the risks of cessation of smallpox vaccination, including the establishment and propagation of monkeypox, although they have outweighed the benefits due to the complications and costs of vaccination [3,4].

Information on the source and extent of the current cases and outbreaks is insufficient. In addition, although only two strains of the virus have been identified in the past, the possibility of novel strains emerging should be considered. Multiple outbreaks, 2022 outbreaks in non-endemic countries, and the high-consequence nature of the pathogen necessitate significant improvements in the quantity and quality of data collection, basic and clinical science research, providing vaccines, people and medical staff informing and education, and guideline development. These lead to more proper management of disease cases and the promotion of public health.

Keywords: Epidemics, Iran, Mass active immunization, Monkey pox, Vaccines, Viral infection

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## Conflict of Interest

The authors had no competing interests.

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