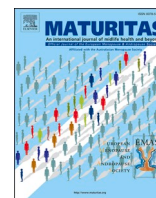




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Editorial

Rare monkeypox: Is it really a threat to the elderly?



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In addition to COVID-19, monkeypox illness is now a major subject, which is a zoonotic viral disease belonging to the *Orthopoxvirus* genus of the Poxviridae family [1]. Cores comprising linear, double-stranded DNA genomes and enzymes necessary for viral uncoating and multiplication are encased inside each virus particles. The World Health Organization (WHO) and UK authorities have issued a warning about a virus that was initially detected in a London patient on 7 May 2022. On 21 May 2022, there were 92 reported cases, these have escalated to 688 cases as of 9 June 2022 in over 20 countries (UK, Sweden, Spain, Portugal, Netherlands, Germany, Italy, France, Belgium, USA, Canada and Australia, etc.) [2]. Globally, 780 laboratory confirmed cases have been notified to WHO from 27 Member States under the International Health Regulations (IHR) while 66 deaths were reported from seven endemic countries. On a daily basis, more individuals are being diagnosed with the condition. Prior to 2003, monkeypox was confined to the rain forests of central and western Africa [3]. In that year, the first cases were documented in the Western Hemisphere. Multiple people in the midwestern United States were reported in late spring 2003 as having suffered fever, rash, respiratory symptoms, and lymphadenopathy after exposure to sick pet prairie dogs (*Cynomys* species) infected with the monkeypox virus [4]. In the absence of a licensed antiviral medication, clinical care of human monkeypox is mostly symptomatic and supportive [5], but a customized vaccinia Ankara (MVA) vaccine has been established and implemented for the management of monkeypox. Research testing the vaccine's efficacy in people has not yet been conducted, although a study evaluating its efficacy and safety among healthcare professionals in Congo is now underway [6].

According to Karl Simpson and colleagues [7], “Researchers outlined the key knowledge gaps: understanding of zoonotic hosts, reservoirs, and vectors; risks associated with transmission; and a complete description of the clinical spectrum and natural history of infection, as well as an estimate of the prevalence of monkeypox-specific antibodies in humans residing in areas of emergence. There is a need for a greater grasp of the epigenetic development and evolving epidemiology of

orthopox viruses, the utility of in-field genomic diagnostics, and the most effective disease control strategies, including the possibility of vaccination with new generation non-replicating smallpox vaccines and treatment with newly developed antivirals.”

Although a major threat is to those born after 1980, when vaccination to smallpox was stopped (which offers protection to monkeypox), who do not have protection against monkeypox, the biggest threat of the emerging viral outbreak is to elderly patients with comorbidities (Fig. 1).

The illness may be transmitted by animal bites and direct contact. It is often transmitted by rats, mice, and squirrels. It may also be acquired by consuming inadequately prepared meat from an infected animal. Common symptoms include headache, backache, muscular discomfort, lymph node enlargement, chills, and fatigue [8].

After cessation of immunization against smallpox there is waning of immunity against *Orthopoxvirus* and hence it is still a threat to elderly patients. A greater prevalence in humans, especially among the immunosuppressed, may afford more opportunities for the monkeypox virus to acquire mutations that improve its viability in human hosts, thereby resulting in increased infectivity, pathogenicity, and potential harm. Also, probability reasoning implies that a zoonotic virus with a RO close to one, such as monkeypox, has greater potential to progress to a condition of high infectivity when distribution chains stretch and the frequency of original introductions grows [9].

Greater focus is required on epidemiological and fundamental research to determine the origin and route of dissemination of the monkeypox virus and the real prevalence of this illness. Successful disease prevention and control measures rely on a thorough understanding of disease incidence, propagation, and containment.

Contributors

Vivek P. Chavda contributed to the design of the article, wrote the article, edited the article and contributed to the interpretation of the

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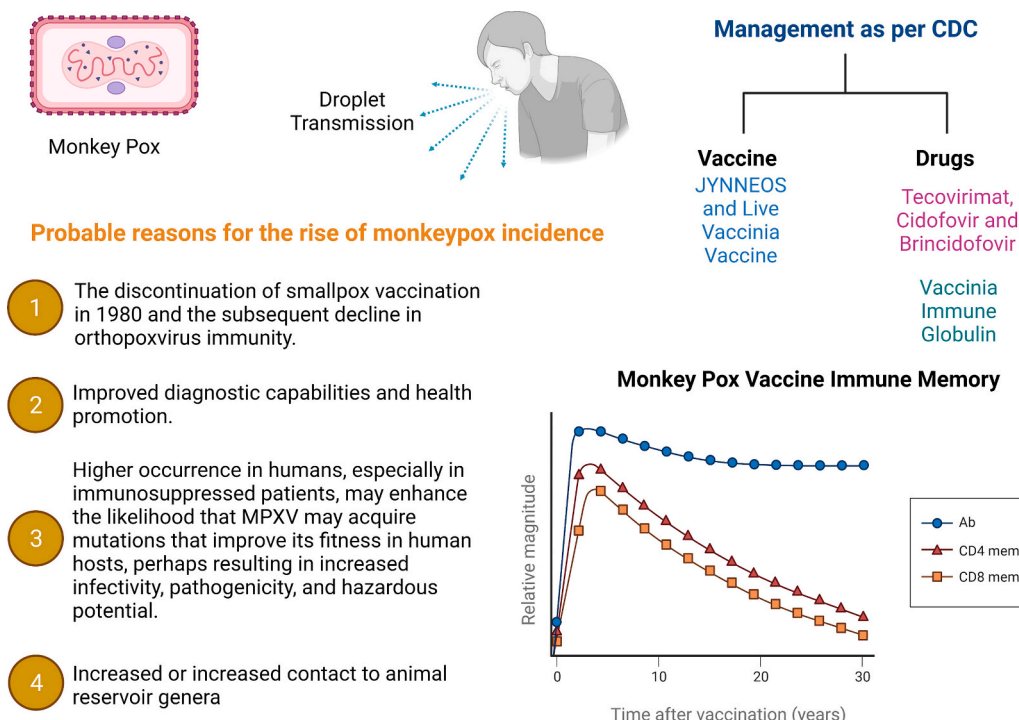


Fig. 1. Monkeypox outbreak: Probable reasons and management strategies.

cited papers.

Vasso Apostolopoulos contributed to the design of the article, edited the article and contributed to the interpretation of the cited papers.

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