



## Correspondence

**Human Monkeypox resurgence 2022; a new presentation as a sexual pathogen**

Dear Editor;

Monkeypox virus (MPXV) is a zoonotic double-strand DNA virus that belongs to the *Orthopoxvirus* genus virus within the family of *Poxviridae*. MPXV is the firstly isolated from Asian monkeys by the Preben Christian Alexander von Magnus in Copenhagen, Denmark. Nevertheless, a 9-month-old boy who lived in the Democratic Republic of the Congo in 1970 is identified as the first human report of monkeypox [1]. Human monkeypox is an endemic zoonosis disease in African countries that be classified into two separate clades include western Africa (low pathogen) as well as Central African clade (high virulent clade).

There were several monkeypox outbreaks in Non-African territories in recent decades, the first reported outbreak outside Africa occurred in 2003 linked to imported wild rodents in the United States [2]. After several sporadic human monkeypox virus infections in the United Kingdom, Singapore, and the United States in 2018 [3]. Nonetheless, lately, in 2022 following the greatest experienced MPXV outbreaks in Nigeria; a wide resurgence outbreak of monkeypox infection is rapidly disseminated worldwide. Concurrently, 42 countries in five WHO Regions with no travel history to African countries reported confirmed cases by more than 2103 tests [4]. This multi-country outbreak is mostly occurring in homosexual men (MSM) via human-to-human transmission than in animal-involved transmission chains that be reported previously [5]. The Initial cases diagnosed were primarily reported by sexual health clinics. Thus, scientists suggest that monkeypox might be sexually transmitted ()

A large portion of those cases occur in MSM living with HIV, Bragazzi et al., 2022 revealed that the prevalence of human MPXV with HIV positive status was about 53.13%. They also found that sexual exposure could be responsible for more than 90% of all cases [6]. According to the literature review, sexual intercourse was primarily condomless with multiple, random/anonymous sexual partners. Recently a human monkeypox co-infection with syphilis was reported in the Czech Republic [7]. Virus detection in semen, genital and rectal lesions, and stool specimens from four Italian MSMs, presence of MPXV in seminal fluid, and unprotected sexual intercourse with four random sexual partners in Europe and Australian cases further human monkeypox was also performed. Seven of the Portuguese sauna cases, as well as Italian cases related to a sex worker, have raised concern over the suspicion hypothesis that monkeypox can be sexually transmitted [8]. However, the Israeli case of MPXV reported a lesion affecting his penile shaft is linked with exposure to African infected carcasses [9]. In addition, the existence of monkeypox in the male reproductive tract is could have occurred following viremia as well as systemic distribution of the virus due to the lack of sufficient strengths of the blood-testicle barrier and the exclusive nature of the testicles. Despite the sexual transmission route, close contact with contaminated lesions, body fluids, as well as respiratory droplets is could be involved in the inter-human transmission of

human monkeypox.

Besides tracing close contacts, preliminary data suggest that genital, and anal lesions, as well as sexual intercourse, likely play important role in the MPXV transmission chain in individuals with a history of no travel to endemic African countries [10,11]. Current evidence revealed that genital lesions of MPXV are attributed to the acquisition of HIV infection [12]. Furthermore, risk factors involved in sexually transmitted diseases (STDs) e.g. young male, MSM, multiple partners, anonymous partners, condomless sex, as well as a history of previous syphilis is suggested as potential contributors to the reemergence of monkeypox cases in non-African regions. Thus, monkeypox could be considered a potential sexual pathogen but current suggestions were not sufficient. Further studies are required to validate this hypothesis.

Implementation of monkeypox diagnostic test ought to be accounted for cases referred to sexual health clinics with a vesicular-papular rash after a prodrome of fever, cases with genital ulcers who had a history of travel to countries with confirmed MPXV cases, as well as cases with inguinal lymphadenopathy with previous fever for 3–5 days.

**Ethical approval**

There is no need for ethical approval.

**Sources of funding**

None.

**Guarantor**

All the authors of this paper accept full responsibility for the work and/or the conduct of the study, had access to the data, and controlled the decision to publish.

**Provenance and peer review**

Not commissioned, externally peer reviewed.

**Declaration of competing interest**

None.

**Author contribution**

Kiarash Ghazvini: Writing and Editing the draft. Masoud Keikha: Study design, data collection, Writing and Editing the draft.

All authors read and approved the final version of the manuscript.

<https://doi.org/10.1016/j.amsu.2022.104267>

Received 12 July 2022; Accepted 20 July 2022

Available online 31 July 2022

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### Registration of research studies

1. Name of the registry: Not applicable.
2. Unique Identifying number or registration ID: Not applicable.
3. Hyperlink to your specific registration (must be publicly accessible and will be checked): Not applicable.

### Acknowledgement

None.

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