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LETTER TO EDITOR

Monkeypox: A new threat for healthcare and urology?

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Dear Editor,

Monkeypox is an emerging zoonotic viral disease caused by the Monkeypox virus, traditionally confined to central and west Africa (1, 2), which has recently spread to other regions worldwide, making it a global health concern. Monkeypox was first identified in humans in 1970 in the Democratic Republic of the Congo and the transmission is mainly due through direct contact with infected animals or people. Sporadic outbreaks have occurred for decades. However, as is happening for other infective diseases (3), the globalization, increased international travel and migration has facilitated the spread of the virus to previously unaffected regions, highlighting its growing importance for public health.

A first monkeypox international outbreak was recorded in 2022-2023, while in 2024 the number of cases increased significantly, so much so that the *World Health Organization* (WHO) prudently declared a state of global health emergency (4). Furthermore, in recent days the first case of a patient affected by the Clade I variant Monkeypox, which is more aggressive and virulent, was recorded in Europe.

Although monkeypox patients primarily presents with dermatological or systemic symptoms, such as fever, skin rashes and pox-like lesions, it can also lead to urological complications, necessitating specialized attention (5). Among urological manifestations, genital lesions have been described in the literature (6-10). These lesions may be painful and appear as vesicles on the external genitalia. In some cases, monkeypox can lead to prostatitis, urethritis and orchitis, making difficult the differential diagnosis from other causes of such diseases (11, 12). For a correct and prompt diagnosis, as well as reporting suspected cases, it is important that the urologist is also aware of the possible urological clinical presentation of Monkeypox.

Unfortunately, as with COVID-19, Monkeypox could create additional healthcare organization (13) and training issues for urology residents. As was per other infectious outbreaks, the potential impact on surgical training and clinical exposure may be significant. One of the primary concerns is the potential reduction in clinical opportunities. During the previous COVID-19 pandemic, elective surgeries were postponed or canceled (14), limiting residents' hands-on experience in performing and assisting urological procedures. This reduction in surgical volume can hinder the development of essential technical skills that are crucial for urologists. Furthermore, the need for infection control measures may limit direct patient interaction. In some Institutions, residents may be restricted from certain areas of the hospital, which can interfere with their ability to perform delicate procedures and communicate effectively with patients, increasing the use of Telemedicine (15-18). Likewise, a possible epidemic/pandemic could strain the availability of teaching faculty, resulting in reduced mentorship and fewer educational and academic opportunities (19).

A monkeypox pandemic might presents significant risks to the scheduling of urological surgeries and the management of waiting lists. As previously happened for COVID-19, during a pandemic, hospitals often reallocate resources, including operating rooms, staff, and supplies, to manage the immediate demands of the infectious outbreak. This can lead to the postponement of non-urgent surgeries, which directly impacts patients awaiting urological procedures (13). As a result, the already long waiting lists can grow longer, with patients experiencing increased anxiety, discomfort, or wors-

ening of their conditions while they wait. Moreover, the prioritization of emergency and urgent cases may lead to a backlog of elective surgeries that becomes increasingly difficult to manage as the pandemic continues.
For all these reasons and many more, we should have learned lesson from COVID-19 and be ready if this Monkeypox emerging viral disease will become pandemic. As we doctors always say "*prevention is better than cure*"! In this possible scenario, the role of us urologists also become important both to prevent the possible spread of the virus by promptly recognizing patients with urological symptoms, and by organizing healthcare facilities as best as possible and immediately in the unfortunate case of a new pandemic.

References

1. Graham F. Daily briefing: Raising the alarm about the monkeypox virus. Nature. 2024 Aug 14. doi: 10.1038/d41586-024-02671-4. Epub ahead of print. PMID: 39147816.

2. Urban N, Valencak J, Bauer WM, et al. Diary of human monkeypox: Illustrations of the clinical course. J Eur Acad Dermatol Venereol. 2023; 37:e672-e674.

3. Mantica G, Van der Merwe A, Terrone C, et al. Awareness of European practitioners toward uncommon tropical diseases: are we prepared to deal with mass migration? Results of an international survey. World J Urol. 2020; 38:1773-1786.

4. Eurosurveillance editorial team. Note from the editors: WHO declares mpox outbreak a public health emergency of international concern. Euro Surveill. 2024; 29:240815v.

5. Catto JWF. Monkeypox and the Urologist: Playing an Important Role in This Emerging Global Outbreak. Eur Urol. 2022; 82:631-632.

6. Moreno-Matson MC, Ocampo MA, Sáenz Rengifo D, Valero HP. Penile necrosis due to monkeypox. Urol Case Rep. 2023; 51:102554.

7. Wegrzyn GH, Kilianek M, Yallapragada S, et al. Genitourinary Mpox: A case report & primer for urologists. Urol Case Rep. 2023; 51:102559.

8. Hamid TA, Elmekresh A, Parkar AZ, et al. Male genital lesions in monkeypox virus infection: a case series. Can J Urol. 2023; 30:11562-11567.

9. Lee J, McLean J, Zucker J, et al. Mpox Genital Lesions: A Large Single-center Experience With Intermediate Follow-up. J Urol. 2023; 210:510-516.

10. Milano E, Belati A, De Santis L, et al. First Case of Paraphimosis as a Severe Complication of Monkeypox. Vaccines (Basel). 2022; 11:63.

11. Kranz J, Bartoletti R, Bruyère F, et al. European Association of Urology Guidelines on Urological Infections: Summary of the 2024 Guidelines. Eur Urol. 2024; 86:27-41.

12. Bausch K, Mantica G, Smith EJ, et al. Genitourinary Tuberculosis: A Brief Manual for Urologists on Diagnosis and Treatment from the European Association of Urology Urological Infections Panel. Eur Urol Focus. 2024; 10:77-79.

13. Leonardi R, Bellinzoni P, Broglia L, et al. Hospital care in Departments defined as COVID-free: A proposal for a safe hospitalization protecting healthcare professionals and patients not affected by COVID-19. Arch Ital Urol Androl. 2020; 92:67-72

14. Campi R, Amparore D, Checcucci E, et al. Exploring the Residents' Perspective on Smart learning Modalities and Contents for Virtual Urology Education: Lesson Learned During the COVID-19 Pandemic. Actas Urol Esp (Engl Ed). 2021; 45:39-48.

15. Ambrosini F, Di Stasio A, Mantica G, et al. COVID-19 pandemic and uro-oncology follow-up: A "virtual" multidisciplinary team strategy and patients' satisfaction assessment. Arch Ital Urol Androl. 2020; 92:78-79.

16. Mirone V, Di Bello F, Morra S, et al. Telemedicine and social media: A contemporary analysis of the most shared content by internet users. Arch Ital Urol Androl. 2024; 96:11206.

17. Mirone V, Abate M, Fusco GM, et al. Telemedicine and YouTube™: Video quality analysis before and after COVID-19 pandemic. Arch Ital Urol Androl. 2023; 95:11341.

18. Mirone V, Celentano G, Collà, et al. Perceptions and attitudes toward the use of telemedicine for the postoperative outpatient urological care during the COVID-19 pandemic in an Academic Hospital in Southern Italy. Arch Ital Urol Androl. 2022; 94:375-379.

19. Carrion DM, Rodríguez-Socarrás ME, Mantica G, et al. Interest and involvement of European urology residents in academic and research activities. An ESRU-ESU-ESUT collaborative study. Minerva Urol Nefrol. 2020; 72:384-387.

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