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# Travel Medicine and Infectious Disease

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## Genital pustules, fever, lymphadenopathy in a heterosexual couple

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A 21-year-old female and her a 22-year-old boyfriend presented to the hospital with genital and oral lesions. The two had unprotected intercourse for seven days during swimming pool bathing before being admitted. Additionally, about 20 days earlier, the female had engaged in several unprotected sexual encounters (oral sex included) with other partners. The female patient presented with a clinical syndrome that resulted in vesicles and pustules on her thighs, buttocks, vulva, labia majora, and vagina (Fig. 1A), a single lesion vesicle on the tongue (Fig. 1B) along with dysuria, inguinal lymphadenopathy, severe pain, swelling, and inflammation of the external genitalia. Vesicles and pustules present as a group on an erythematous base with central umbilication. Fever (39.5 °C) was also present at the time of presentation. The boyfriend presented with a fever (38.5 °C), sore throat, bilateral submandibular and inguinal lymphadenopathy, and similar vesicles and pustules on the penis, glans, and groin (Fig. 1C and D). He claimed to have shaved his pubic hair with a razor in the days before the onset of the symptoms.

For both, a real-time polymerase chain reaction (PCR) assay was used on swabs to research monkey poxvirus DNA and Herpes simplex virus (HSV) DNA. Multiplex PCR assay was performed on vaginal and urethral swabs for other sexual transmission infections (chlamydial, gonococcal, mycoplasma, ureaplasma, and trichomonas infections) and serological tests for syphilis, herpes simplex, HIV, HBV, and HCV. Real-time PCR for monkeypox (MPX) virus was negative, but it was positive for HSV-1. In addition, IgM anti-HSV antibodies were positive in the female patient, and elevated C-reactive protein levels (about 50 mg/l) were also found in both cases. The oral administration of acyclovir 400 mg three times a day for 10 days resulted in a resolution of the symptoms

in both individuals.

Twenty-five percent of incident HSV-1 infections in people aged 15 to 49 are estimated to be genital and approximately 85% are presumed due to oral-genital transmission. Symptomatic initial infection presents with multiple, painful bilateral vesicular lesions and compared to symptomatic recurrences, may be characterized by fever, malaise, headache, lymphadenopathy, and rarely meningitis or encephalitis [1, 2]. Due to the severity of the clinical presentation and the look of the lesions, differential diagnosis of MPX can be challenging. In fact, the current outbreak of MPX is characterized by atypical clinical pictures [3, 4]. Lesions may be painful and localized to the genital area and associated with systemic symptoms. These features make differential diagnosis difficult, especially for primary genital herpes. Other clinical presentations differing from the historical monkeypox are described in literature like proctitis, single perianal lesion, painless scattered umbilicated vesicles, lymphadenopathy [5–7]. The differential diagnosis with lymphogranuloma venereum, syphilis, symptomatic genital herpes recurrence, and molluscum contagiosum may also be challenging [8,9].

In our case, the clinical features, the high fever, and the history of multiple sexual intercourses made us suspect MPX, although most cases of MPX have so far been described in men who have had sexual intercourse with other men. In contrast to her boyfriend, the woman had anti-HSV IgM antibodies. She most likely contracted the infection a few days prior during unprotected sexual encounters with other men, and then transmitted it to her boyfriend. Diagnostic molecular biology was crucial for differential diagnosis and identification of herpes simplex virus type 1 as the causative agent.

In conclusion, we encourage clinicians to consider genital herpes in

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**Fig. 1.** A Vesicles and pustules on external genitals, thighs, and buttocks of female patient; 1 B single vesicle on the tongue of the female patient; 1 C umbilicate lesion on the penis of the male patient; 1 D Vesicles and pustules on inguinal area, and penis of male patient.

the differential diagnosis of monkeypox virus infection, especially in low-risk individuals, and we believe it is important to include monkeypox virus research in the biomolecular panels of sexually transmitted infections.

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**Luca Pipitò:** Investigation, Writing – original draft. **Antonio Cascio:** Conceptualization, Writing – original draft, All authors have read and agreed to the published version of the manuscript.

#### Declaration of competing interest

Nothing to declare.

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