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Monkeypox presenting as an isolated genital rash: a case report

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Abstract

Monkeypox has recently garnered global attention, particularly in 2022, due to a worldwide outbreak. It is a viral infection that begins as a rash on the face and then spreads to other parts of the body. In recent times, cases presenting as genital lesions have been reported, particularly among men who have sex with men (MSM). We present a unique case of a 20-year-old male from Riyadh, Saudi Arabia, who developed an isolated genital rash after engaging in heterosexual contact. This case represents one of the rare local monkeypox infections in Saudi Arabia and emphasizes the significance of considering sexual transmission outside of MSM populations. The patient initially presented with fever and a localized vesicular rash in the pubic area, which evolved into erythematous plaques on other parts of the body. Laboratory confirmation of monkeypox was attained, and supportive treatment was provided. Therefore, physicians should consider monkeypox when diagnosing sexually transmitted diseases that present as genital lesions and reinforce the importance of health education on safe sexual practices to decrease viral spread.

Introduction

Monkeypox, a zoonotic viral infection caused by the monkeypox virus, has reemerged with global outbreaks in 2022.[1] The first case of monkeypox was reported in 1970 in Africa.[2] Between 1970 and 2022, there have been few cases reported in travelers in nonendemic areas. However, in 2022, the World Health Organization declared an international emergency. More than 1350 incidents of monkeypox have been confirmed in 31 nonendemic countries worldwide. Almost 810 of these cases had been reported from Portugal, Spain, and the United Kingdom.[3] In a systematic review study, 4222 monkeypox cases were documented, of which 3876 cases are due to sexual contact and are spread over twelve countries; 4152 of these cases are male patients with a mean age of 36 years.[1]

As of March 2023, seven cases of monkeypox were reported in Saudi Arabia. All of the affected individuals were male, aged between 24 and 41, and had traveled abroad. Three cases (43%) had heterosexual contact, while the remaining cases involved other personal contacts.[4]

Monkeypox is transmitted through close contact with animals or humans and through respiratory and semen secretions. In 2022, the majority of monkeypox cases were reported among men who had sex with men, with a vesicular-pustular rash in the genital areas.[5] The incubation period for monkeypox is from 7 to 21 days until the rash scabs and heals.[6] Monkeypox virus starts with a

prodrome of fever, malaise, and headaches. A lymphadenopathy usually accompanies the fever, a distinguishing feature of monkeypox. After one to five days of the onset of prodrome, a maculo-vesicular rash appears.[7] This case report highlights a unique clinical presentation and emphasizes the importance of considering sexual transmission as part of monkeypox's evolving epidemiology.

Case Report

A 20-year-old male presented to the emergency department complaining of fever and a pubic lesion that had appeared five days before. The lesion was painful and vesicular and had subsequently crusted. The patient reported engaging in an unprotected sexual encounter with a female one week before the onset of symptoms. This was the patient's first instance of unprotected sexual activity. The patient was conscious, oriented, and hemodynamically stable. He denied respiratory symptoms, nausea, vomiting, abdominal pain, dizziness, syncope, headache, neurological symptoms, photophobia, penile pain, discharge, or urinary symptoms.

Physical examination revealed multiple tender annular gray plaques with black centers over the pubic area and penis (Figure 1). Additionally, erythematous annular plaques with central crusts were noted on the left hand, right thigh, and behind the left ear (Figure 2). No mucous membrane involvement and no enlargement of lymph nodes were noted.

A comprehensive sexually transmitted disease workup was initiated. Swabs for monkeypox, herpes simplex virus, varicella zoster, syphilis, gonorrhea, chlamydia, and human immunodeficiency virus (HIV) were obtained, and the diagnosis of monkeypox was confirmed. After that, the patient was placed in an isolation room. No antiviral therapy was initiated, and the decision was made to continue with supportive treatment. The patient was prescribed mometasone ointment twice daily for two weeks over the pruritic areas and antihistamines as needed. The patient was educated about monkeypox's mode of transmission, incubation period, signs and symptoms, and treatment options. A follow-up was scheduled to monitor the response to treatment and discuss any concerns.

Discussion

Historically, monkeypox rashes typically started on the face, spreading centrifugally.[8] However, the 2022 outbreak has seen a shift, with cases frequently involving genital and perianal lesions, particularly among men who have sex with men (MSM).[9] In a Spanish study, 92% of monkeypox

patients were gay or bisexual men, while 8% were heterosexual men or women.[10] Similarly, a U.S. study reported that 94% of cases involved intimate male-to-male contact, with 99% occurring in men.[11] In contrast, our patient's infection followed heterosexual contact, suggesting that while MSM remain a significant demographic for transmission, other groups are increasingly affected, as seen in this study.[4] This broadening scope emphasizes the need to consider sexual history when assessing potential monkeypox cases.

It is important to thoroughly assess patients with suspected monkeypox for concurrent sexually transmitted infections (STIs), including syphilis, HIV, herpes simplex virus, and gonorrhea, as co-infections are common. Studies have shown that up to 29% of monkeypox cases may also have another STI. This highlights the importance of thorough screening for people who present with genital lesions or other unusual characteristics. Such a diagnostic technique helps to avoid additional transmission among at-risk populations in addition to facilitating prompt isolation and management.[12]

While most cases reported in Saudi Arabia were travel-related, our patient contracted monkeypox locally. Our patient presented with an isolated pubic rash, without systemic symptoms, contrasting with the typical presentation of monkeypox, which usually begins on the face and extremities with systemic involvement.[8] Unlike our patient, the most common systemic manifestation, reported in an international case series across 16 countries, is fever (62%), followed by lymphadenopathy (55%).[12] This pattern of genital involvement aligns with recent reports from Brazil, Australia, and the USA, where similar presentations have been observed during the 2022 outbreak.[13-15]

In a systematic review of 3876 monkeypox cases, the management of monkeypox primarily involves supportive care, even though some did not require any treatments.[1] In this case, supportive measures were initiated, and the patient was prescribed topical mometasone ointment for symptomatic relief. Although most monkeypox cases resolve on their own and are treated with supportive care, the severity of the clinical presentation – manifested by systemic symptoms, fever, or lymphadenopathy – warrants consideration of antiviral therapy. The Food and Drug Administration (FDA) approved tecovirimat in 2018 and oral brincidofovir in 2021 for the treatment of monkeypox.[16] Tecovirimat (TPOXX) has been the first-choice antiviral for severe cases. Other medicines like brincidofovir and cidofovir may also be used, but only with caution due to their possible toxicity. Supportive measures – pain management, topical corticosteroids for inflammatory lesions, antihistamines for pruritus, and antibiotics for subsequent bacterial

infections – are integral to the care of monkeypox, especially in patients with impaired immune systems or when complications occur.[16]

The risk of monkeypox transmission through sexual contact, including unprotected intercourse, adds complexity to its epidemiology. This case underscores the importance of comprehensive health education and preventive measures, particularly safe sexual practices, to mitigate the spread of monkeypox and other sexually transmitted infections. Another important part of preventing monkeypox is vaccination, particularly for vulnerable or high-risk populations. There are currently two vaccines on the market: ACAM2000, a live replicating vaccine that is efficacious but has a higher risk of side effects such as myocarditis, and JYNNEOS (Imvamune/Imvanex), a non-replicating Modified Vaccinia Ankara (MVA) vaccine that is recommended because of its safety profile. In addition to promoting post-exposure prophylaxis within four days of contact with confirmed cases, the CDC and WHO advise pre-exposure vaccination for populations at elevated risk, such as healthcare workers and others who may be exposed.[3]

Patient's perspective

The patient experienced significant anxiety following the emergence of genital lesions, which occurred after his first unprotected sexual contact, due to the stigma linked to sexually transmitted infections. Despite having these concerns, the patient felt relieved after explaining his condition and its management.

Conclusions

Monkeypox epidemiology has been changing due to its potential to present as isolated genital lesions following heterosexual contact. It is crucial to consider monkeypox in the differential diagnosis of sexually transmitted diseases for any patient presenting with a genital rash.

Additionally, this case highlights the need for medical education for safe sexual practices to reduce the spread of monkeypox.

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Figure 1. Multiple tender annular gray plaques with black centers over the pubic area and penis.

Figure 2. Erythematous annular plaques with central crusts behind the ear (A), on the left hand (B), and right thigh (C).