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Fistulising lymphadenitis in a patient with MPOX infection

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Case Report

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Abstract

Background

Atypical presentations and complications of MPOX infection are uncommon but can occur; lymphadenopathy with rupture and fistulisation to the skin is a very rare complication.

Case report

A 48-year-old man with a history of controlled HIV infection presented with painful genital oedema and skin lesions that had been present for 5 days, following unprotected sexual intercourse 7 days earlier. Vesiculopustular lesions were observed affecting the glans and foreskin, with necrosis of the foreskin and marked oedema; these lesions also extended around a deep ulcer over a palpable lymph node, with erythema and induration of the surrounding soft tissues. Computed tomography revealed a fistulous tract between an inguinal lymph node and the skin. Microbiological tests were carried out using bacterial culture and PCR on exudate from the inguinal ulcer and the papules, with positive results for MPOX clade IIb.

Conclusion

We present a case of a regional lymphadenitis with cutaneous fistulisation, an exceptionally rare MPOX complication, with only two cases reported. Persistent MPXV DNA in fistulous tracts suggests a potential viral reservoir, highlighting the importance of wound care, pain management and prolonged isolation measures.

BACKGROUND

MPOX is a zoonosis caused by the mpox virus (MPXV), a double-stranded DNA virus of the genus Orthopoxvirus. The infection most commonly causes skin lesions, accompanied by swollen lymph nodes and a fever, and, less commonly, other symptoms and complications.

Lymphadenitis with a skin fistula is a very rarely documented complication that leads to a worsening of symptoms and a longer recovery time.

In this case, we present a patient with an MPOX infection complicated by lymphadenopathy with a skin fistula.

CASE REPORT

A 48-year-old man living with HIV for 15 years, and currently has an undetectable plasma RNA viral load and a CD4 + cell count of 550 cells/l. He presents with oedema, pain and skin lesions in the genital region, which have been present for 5 days. He admits to having had unprotected sex with other man 7 days before the onset of the lesions. No recent travel abroad. On examination, whitish papules are

observed on the glans, with significant oedema throughout the entire penis, resulting in phimosis and a seropurulent-appearing exudate (Fig. 1). He also presents with a soft, painful ulcer in the left inguinal region, surrounded by whitish papules similar in appearance to those on the glans (Fig. 2). Bilateral inguinal lymphadenopathy is palpable. The CT scan reveals a fistulous tract between an inguinal lymph node and the skin (Fig. 3). He has no fever or systemic symptoms, no purulent urethral discharge, and no other skin lesions outside the genital area.

Microbiological tests were carried out using bacterial culture and PCR on exudate from the inguinal ulcer and the papules, with positive results for MPOX clade IIb. Culture and PCR tests for herpes simplex virus, varicella-zoster virus, Chlamydia trachomatis and the Mycobacterium tuberculosis complex were negative.

Treatment was initiated with oral prednisone at a dose of 0.5 mg/kg, oral ibuprofen, topical fusidic acid and oral amoxicillin plus clavulanic acid.

Over the following days, the patient developed scattered individual lesions across the rest of the skin, whilst remaining free of systemic symptoms and showing improvement in the oedema in the genital area, allowing for diuresis. Finally, after two weeks, the lesions began to re-epithelialise and the patient's condition improved favourably. The inguinal fistula persisted for 8 weeks until it had completely re-epithelialised.

DISCUSSION

The MPOX prevalence has risen sharply since the global outbreak caused by clade IIb in 2022 to the present day. The classic clinical presentation includes skin lesions accompanied by fever and regional lymph node involvement. It is estimated that skin lesions are present in 82 per cent of cases, fever in 54 per cent and lymphadenopathy in 51 per cent[1].

Transmission occurs mainly through close contact with lesions, secretions or contaminated surfaces. Following a typical incubation period of 5 to 21 days, the disease may cause fever, headache, myalgia, lymphadenopathy and maculopapular lesions that progress to vesicles, pustules and scabs over a period of 2 to 4 weeks; confirmation is achieved by polymerase chain reaction (PCR) testing of a lesion. Most cases are self-limiting, but the risk of severe disease is increased in immunocompromised individuals — particularly those with advanced HIV infection — young children and pregnant women[2].

Although the clinical manifestations of mpox infection have been better studied[3], no new targeted treatment with clear clinical efficacy has been developed or validated. Tecovirimat, already used for its activity against orthopoxviruses, has not demonstrated efficacy compared with placebo in patients with clade II mpox in recent clinical trials[4]. Therefore, management remains primarily supportive. The use of systemic steroids is not recommended in all patients due to the risk of suppressing the immune response, particularly in immunocompromised patients. It is reserved for severe neuroinflammatory

cases and when there is extensive mucosal involvement[5,6]. Therefore, management remains primarily supportive.

The differential diagnosis in this case included: lymphogranuloma venereum caused by Chlamydia trachomatis serovars L1–L3; chancroid (soft chancre), caused by Haemophilus ducreyi; genital herpes with a deep inguinal lesion in an immunocompromised patient; and periorificial tuberculosis associated with inguinal scrofuloderma.

Lymphogranuloma venereum usually causes a single, painless ulcer in the genital region with minimal inflammation. This would not explain the marked oedema and the multiple lesions we observed on the penis and around the swollen lymph nodes[7].

Chancroid causes a single ulcer with irregular edges. This would not explain the multiple lesions we observed on the penis and around the swollen lymph nodes[8].

Herpes lesions are fluid-filled vesicles and pustules that occur in clusters, and the development of necrotising lymphadenitis is rare[9].

The characteristic lesions of periorificial tuberculosis are irregular ulcers with a granulomatous appearance and a more chronic course[10].

Various complications arising from MPOX infection have been reported since its global spread in 2022[11]. Owing to its sexual transmission, the genital area is one of the first to be affected, with marked oedema and an inflammatory reaction that can lead to phimosis and paraphimosis, acute urinary retention or secondary infections that may even require surgical debridement of necrotic tissue.

Regional lymphadenitis with rupture and fistulisation to the skin is an extremely rare complication of MPOX. Given its aggressive nature, it is likely to be more common in clade I, and its incidence is probably underreported. To the best of our knowledge, only two cases have been reported: one in the Central African Republic[3] and another in Sweden. In the case described in Sweden[12], fistulisation was associated with the persistence of MPXV DNA in the fistula tract for weeks after onset, suggesting a possible local reservoir and reinforcing the need for wound care, pain management and prolonged contact isolation measures.

Declarations

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Conflict of Interest Disclosure: None Declared.

Data availability statement: All data generated or analysed during this study are included in this published article.

This work was conducted ethically in accordance with the World Medical Association Declaration of Helsinki. Informed consent was obtained from the patients for being included in the article. All procedures and the handling of data were performed considering the patient's privacy and following ethical standards for medical research.

Author Contribution

AGG and EPZ wrote most of the manuscript. NGC and AGE wrote the rest. NGC came up with the idea and prepared Figures 1–3. AGE provided the references and supervised the work. All authors reviewed critically the manuscript.

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Figures



Figure 1

vesicular pustules on the glans and foreskin, with necrosis of the foreskin and marked oedema.



Figure 2

A deep ulcer over a palpable lymph node, with erythema and induration of the surrounding soft tissues.



Figure 3

A pelvic CT scan showing a left inguinal lymph node enlargement with a tract extending towards the surface, with gas present between the lymph node and the skin.