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Case Report

Monkeypox Clade Ib Outbreak in Kenya: A Rare Presentation of Pharyngo Tonsillitis as the Dominant Prodrome

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Abstract

Background: During 2022-2023 multi-country Mpox outbreak and World Health Organization and Africa Centre for Disease Control (CDC) declaration in 2024 as a Public Health Emergency of International Concern sustained clade Ib transmission., Kenya documented sporadically since July 2024. Monkeypox (Mpox) can present without the genital lesions or sexual exposure that dominated the 2022 clade IIb outbreak. Clinicians outside known transmission clusters may not recognize severe pharyngotonsillitis as the dominant prodrome which is very uncommon.

49-year-old immunocompetent Kenyan woman, who developed a two-week prodrome of severe pharyngotonsillitis, malaise, myalgia and intermittent fever, followed by a generalised vesiculopustular rash beginning on the face and progressing to the trunk, extremities and genitalia. She had history of travel to the Kenyan coast prior to symptom onset even though no specific high-risk close contact, sexual exposure. She had treatment as an outpatient for presumed bacterial tonsillitis with oral azithromycin and dexamethasone. On admission she was sick-looking and had all the blood workup including viral serology. Lesion swab PCR confirmed Monkeypox virus DNA on day 5 of admission. Clade was not characterised due to limitations in laboratory capacity. Patient was transferred to single-room isolation with standard, contact and droplet precautions per WHO guidance. Management was supportive, with analgesia, gentle skin care, oral lozenges and intravenous fluid rehydration. Lesions crusted and re-epithelialized over approximately three weeks. No secondary transmission was identified among seven household contacts (including two children aged 5 and 7 years) or among healthcare workers.

Keywords: Mpox Kenya; Monkeypox Clade Ib; Pharyngotonsillitis

Introduction

Mpox is a viral zoonosis caused by Monkeypox Virus (MPXV), an enveloped, double-stranded DNA virus of the genus Ortho poxvirus, family Poxviridae. Two genetic clades are currently recognised: clade I (subclades Ia and Ib), historically more virulent and concentrated in Central Africa and clade II (subclades IIa and IIb), with clade IIb responsible for the 2022-2023 multi-country outbreak that led the World Health Organization (WHO) to declare a Public Health Emergency of International Concern (PHEIC) [1-3].

A second mpox PHEIC was declared by the WHO in August 2024 in response to the emergence and spread of clade Ib MPXV from the eastern Democratic Republic of the Congo to neighbouring countries, including Kenya. Between July 2024 and February 2025, Kenya documented 48 PCR-confirmed clade Ib mpox cases, predominantly along the Mombasa-Malaba transport corridor; sexual transmission was suspected in 63% and 23% of patients were HIV co-infected [4].

This is the report a 49-year-old immunocompetent woman in Nairobi who developed Mpox during the active Kenyan outbreak after travel to the coast, with severe pharyngotonsillitis as the dominant prodromal feature and a generalised pustular rash that included genital involvement. No specific close contact or high-risk exposure was identified. The case illustrates three points relevant to clinicians in outbreak settings: (1) that Mpox should remain a differential for atypical pharyngotonsillitis with subsequent rash, particularly when antibiotics fail; (2) Empirical isolation should not await PCR confirmation; (3) that supportive care alone is appropriate for most immunocompetent patients in light of the negative results of the PALM007 trial of tecovirimat in clade I disease [5].

Materials and Methods

A 49-year-old Kenyan woman, living in Nairobi with her husband and two children (aged 5 and 7 years), presented with a two-week history of progressive throat pain, generalised malaise, myalgia and intermittent fever. She had no relevant past medical history, was on no regular medication and had no known immunosuppressive condition. She reported recent travel to the Kenyan coast, no history of contact with a person with rash or fever or animal exposure was identified on detailed enquiry. She had no known or documented prior smallpox or Mpox vaccination. She had initially been managed as an outpatient for presumed bacterial tonsillitis with oral azithromycin and oral dexamethasone, without improvement. Approximately one week into her illness, she developed a painful pustular rash that began on the face and progressed centrifugally to the trunk, extremities and genital area.

She was sick-looking, afebrile (temperature 35.4°C), with stable haemodynamic. Cervical lymphadenopathy was prominent. Oropharyngeal examination revealed grade 3 hyperaemic tonsillar hypertrophy with septic spots. On day 7, The skin showed multiple deep-seated, well-circumscribed, tender pustules in a generalised distribution involving the face, trunk, extremities and genital area, predominantly in similar stages of evolution; some lesions showed central umbilication. Cardiovascular, respiratory and neurological examinations were unremarkable (Fig. 1).

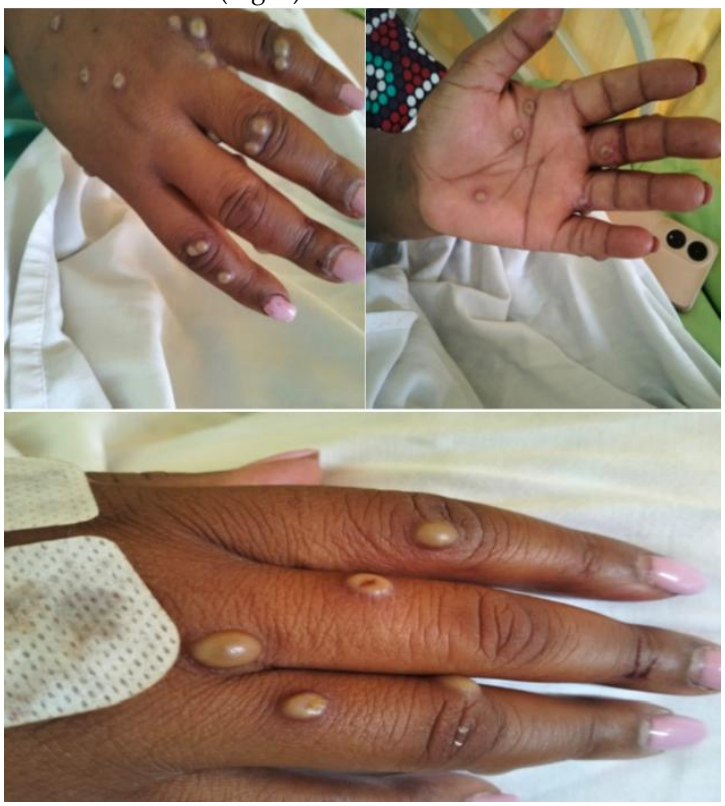

Figure 1: Integument - pustules (pus-filled) generalized distribution, tender.

Hospital admission course: Empirical intravenous levofloxacin and intravenous dexamethasone initiated pending diagnosis. Blood investigations drawn; HIV and VDRL serology requested. Followed by Dermatology review-clinical diagnosis of Mpox. Patient transferred to single-room isolation. Lesion swabs collected by the National Public Health Laboratory team in liaison with Nairobi County Department of Health for MPXV PCR. Intravenous metronidazole added; sitz baths and Dettol baths commenced. Dettol-induced skin irritation noted; switched to calamine lotion. Intravenous paracetamol used for analgesia. From day 3, Lesion progression with development of pearly white pustules and umbilication consistent with Mpox (Fig. 2).

Figure 2: Clinical Course LAD: Lymphadenopathy, PCR: Polymerase Chain Reaction.

Case Report

Diagnostic Assessment of the Patient

Full blood count: White cell counts 10.31 × 10^9/L (within normal range); haemoglobin 12.9 g/dL; platelets 405 × 10^9/L. Inflammatory markers: C-reactive protein 37 mg/L (elevated); procalcitonin <0.30 ng/mL (low) as per facility laboratory reference range. Renal and liver function: Within normal limits. Serology: HIV ELISA negative; VDRL non-reactive. Microbiology: Lesion swabs sent to the National Public Health Laboratory for MPXV PCR-positive for MPXV DNA on day 5. Clade-specific characterisation was not performed.

Differential Diagnosis for Mpox are:

- Varicella zoster virus infection (chickenpox or disseminated zoster)-lesions in the same stage of evolution within body regions, prominent lymphadenopathy, deep-seated pustules
- Disseminated herpes simplex virus infection-generalised distribution, deep-seated pustules, severity of constitutional symptoms
- Drug-related dermatitis (azithromycin or other)-deep-seated pustular morphology with umbilication, prominent lymphadenopathy, mucosal involvement
- Post-infectious exanthem-deep-seated pustular morphology, evolution and lymphadenopathy
- Sexually transmitted infections (secondary syphilis, disseminated gonococcal infection)-VDRL non-reactive; clinical features atypical
- Bacterial impetigo or staphylococcal pustulosis-distribution, mucosal involvement, lymphadenopathy
- Smallpox-not considered clinically credible given global eradication; included only for completeness given orthopoxviral differentials

Mpox confirmed by PCR detection of Mpox virus DNA in lesion swab material.

Therapeutic Intervention

Before Mpox was suspected, the patient received empirical broad-spectrum antibiotic therapy (intravenous levofloxacin 750 mg once daily and intravenous metronidazole 500 mg three times daily) and intravenous dexamethasone 4 mg three times daily. Once Mpox was clinically suspected on day 2 of admission, the patient was transferred to single-room isolation. Following PCR confirmation on day 5 and exclusion of bacterial superinfection, antibiotics were rationalised and corticosteroids discontinued. In addition, supportive care with analgesic, skin care with gentle cleansing and topical calamine lotion, oral lozenges; intravenous fluid rehydration, Antipruritic therapy with cetirizine were initiated.

Antiviral therapy with tecovirimat was considered but not administered. The decision reflected (i) the immunocompetent host; (ii) absence of severe complications (no encephalitis, pneumonitis, ocular disease, severe proctitis or sight-threatening disease); and (iii) the negative primary efficacy outcome of the PALM007 randomised, placebo-controlled trial in clade I MPXV infection [5]. Contact and droplet precautions were applied per WHO guidance for hospitalised patients with Mpox. The case was notified to Nairobi County Department of Health and household contact tracing was undertaken in coordination with the Ministry of Health.

Follow-Up and Outcomes

Systemic symptoms and tonsillitis resolved over approximately seven days of inpatient stay. The skin lesions progressively crusted, scabs separated and re-epithelialisation was complete by approximately three weeks from rash onset, at which point isolation was discontinued in line with WHO and CDC guidance. No secondary cases were identified among the seven household contacts (including two children aged 5 and 7 years) monitored during the period, nor among healthcare workers exposed prior to isolation.

Discussion

Two cognitive factors contributed to the initial misdiagnosis as bacterial tonsillitis, viz. severe pharyngotonsillitis as the dominant prodromal feature, is not the textbook presentation. In the international Thornhill cohort of 528 patients with confirmed Mpox during the 2022 multi-country outbreak, 21% had pharyngitis, 26 (5%) presented with oropharyngeal symptoms as the initial manifestation and 23% of patients with mucosal lesions had lesions confined to the oropharynx [3]. Severe oropharyngeal Mpox with airway compromise has been described, including cases of Mpox tonsillitis in patients initially presumed to have bacterial pharyngitis [6,7]. Pharyngeal mpox-group A streptococc*us* co-infection requiring intubation [8]. Genital ulceration that came to anchor clinical recognition during the 2022-2023 outbreak; was a delayed presentation in our case.

In regions with active Mpox transmission, oropharyngeal symptoms that fail to resolve on appropriate antibacterial therapy, particularly when followed by a febrile prodrome and any vesiculopustular eruption should prompt consideration of Mpox before further antibiotic escalation and certainly before further empirical corticosteroid therapy [9].

Lymphadenopathy is characteristic of Mpox and helps distinguish it from varicella (lesions in multiple stages, "cropping" pattern, less prominent lymphadenopathy) and from disseminated herpes simplex virus infection (grouped vesicles, less generalised distribution) [1,9,10]. Prominent lymphadenopathy in particular has historically been used to distinguish Mpox from smallpox and from varicella.

Clade-specific characterisation was not performed in our case due to resource constraints. We therefore cannot confirm that this was a clade Ib case, although the temporal and geographical context an outbreak in which all confirmed Kenyan cases during July 2024-February 2025 were clade Ib4 and the lesion distribution combined generalised and anogenital, a pattern that has been associated with clade Ib are consistent with clade Ib infection [11]. Whole-genome sequencing of MPXV in suspected sporadic or community-transmission cases would substantially strengthen public health understanding of how the Kenyan outbreak is propagating beyond the recognised transportation-corridor and sexual-network clusters.

Tecovirimat-an orthopoxvirus envelope-protein inhibitor (VP37 inhibitor), was widely recommended for severe Mpox and high-risk hosts, on the basis of efficacy in animal models and the safety profile in healthy volunteers. The PALM007 randomised, double-blind, placebo-controlled trial in 597 patients with PCR-confirmed clade I MPXV infection in the Democratic Republic of the Congo, published in 2025, found no reduction in days to lesion resolution with tecovirimat compared with placebo, with 14-day mortality of 1.7% across both groups in the context of high-quality supportive care [5]. It implies that, for immunocompetent patients with non-severe clade I disease, like our patient, supportive care alone is appropriate. Tecovirimat may still have a role in highly immunocompromised hosts, severe disease encephalitis, pneumonitis, sight-threatening ocular disease and pregnancy. This should now be considered case wise, alongside specialist consultation rather than as a default for all confirmed cases [12].
No secondary cases were identified and we attribute this to early empirical isolation following the day-2 dermatology suspicion (rather than waiting for PCR). Implementation of protocol standard, contact and droplet precautions in line with WHO and CDC guidance, good hand hygiene, careful linen handling, lesion covering during transfers and post-exposure household counselling

are essential in management [13,14]. Undetected infection and delayed isolation have been identified as key drivers of Mpox transmission internationally [10].

Strengths and Limitations

The strengths of this report are detailed clinical documentation, microbiological confirmation by PCR (the diagnostic gold standard) and careful longitudinal follow-up of household and healthcare contacts during the period of risk [15,16].

Limitations are substantial as this is a single case and inferences about generalisability are limited. Clade-specific genomic characterisation was not performed, so the contribution of this case to the clade Ib outbreak literature is necessarily by clinical-epidemiological inference rather than direct molecular evidence. Although a careful exposure history was taken, we cannot exclude unreported contact events; underreporting of sexual or close-contact exposure is well recognised in case-control studies of Mpox [3,4]. Anti-orthopoxvirus IgM serology was not performed and would have provided complementary information. Antiviral therapy was not available in our centre at the time of admission and therefore a counterfactual comparison of supportive care versus tecovirimat in this patient cannot be drawn, although the negative PALM007 result reduces the importance of this limitation [5].

Conclusion

Mpox should remain on the differential in patients presenting with severe pharyngotonsillitis followed by a vesiculopustular rash, particularly when antibacterial therapy fails and especially in regions with documented ongoing transmission such as Kenya during the 2024-2025 clade Ib outbreak. Supportive care alone is appropriate for most immunocompetent patients with non-severe Mpox, in light of the negative PALM007 trial result for tecovirimat. Empirical corticosteroids should be avoided in undifferentiated febrile pharyngotonsillitis with rash until viral aetiology has been considered. Mpox can present in immunocompetent adults outside the dominant trucking-corridor and sexual-network transmission clusters, with severe pharyngotonsillitis as the dominant prodrome and no readily identifiable close contact. A high index of suspicion in patients with pharyngotonsillitis followed by a deep-seated, painful vesiculopustular rash, combined with empirical pre-PCR isolation and conservative supportive management, allowed effective containment and recovery without antiviral therapy or onward transmission in this case.

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Ethical Statement

Institutional ethics approval was granted by the Karen Hospital Ethics Review Committee.

Informed Consent Statement

The patient provided written informed consent for the publication of this case report and accompanying images, with all identifying information removed.

Authors' Contributions

All authors contributed equally to this paper.

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