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Clinical progression of asynchronous cutaneous lesions in a patient with locally acquired mpox infection

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Rash

Abstract We present one of the earliest domestic mpox cases in Taiwan, highlighting the asynchronous and atypical progression of cutaneous lesions which could pose significant diagnostic challenges for clinicians.

Dear editor

The 2022–2023 Mpox outbreak is caused by clade II (formerly West African clade) of monkeypox virus (MPXV), which is less severe compared to the Central African clade.[1] Although emerging data suggest transmission beyond gay, bisexual, or men who have sex with men (MSM),[2] spread is still disproportionately affecting MSM sexual networks.[1,3] Manifestations tend to be atypical with localized and asynchronous cutaneous lesions,[3] posing diagnostic challenges for clinicians.

A 33-year-old male presented to the emergency department with a 6-day history of nausea and dizziness, a 3-day history of fever and sore throat, and 1-day history of systemic maculopapular rashes that were mildly painful but not pruritic. He identified as gay and reported having sex only once over the past month, which involved kissing and penetrative anal sex with condoms with his male partner in a noncommittal relationship 8 days before illness (Fig. 1A). They do not live together, and the patient did not notice any skin lesions on his partner during their encounter at the latter's home. His partner was reportedly asymptomatic from when they met till after the patient developed symptoms. The patient works as an office administrator. He did not travel overseas, smoke tobacco, use illicit drugs, drink alcohol, nor attend any sex-on-site events during the past year. He also denied participating in any large gatherings such as clubbing over the past month. His oral medications include amoxicillin/clavulanate and ketorolac for bacterial pharyngitis prescribed 2 days before visiting the emergency department. He denied any previous drug allergies.

On physical examination, nonblanchable, confluent, maculopapular, erythematous rashes were noted on his face, trunk, and thighs, scattered with pinpoint pustules of 1.0 × 1.0 mm (Fig. 1B). Distribution of rashes was seemingly centrifugal. Vesicles were noted on his left knuckle and fifth finger. An ulcer was observed on the left plantar interdigital web space. Two central-umbilicated pustules around 2.0 × 2.0 mm were found on his penile prepuce (Fig. 1C). Bilateral inguinal lymphadenopathies, and grade 4/4 tonsils with exudates were also noted. The patient was unable to identify the time and sequence when his penile pustules, knuckle vesicles, and interdigital ulcer developed as he was mostly bedridden after fever.

Complete blood count showed white cell count 16,360/μL, neutrophils 71.8%, lymphocytes 21.4%, hemoglobin 15.3 g/dL, platelets 245,000/μL, C-reactive protein 19.0 mg/dL. Rapid plasma reagin for syphilis and human immunodeficiency virus antigen and antibody were

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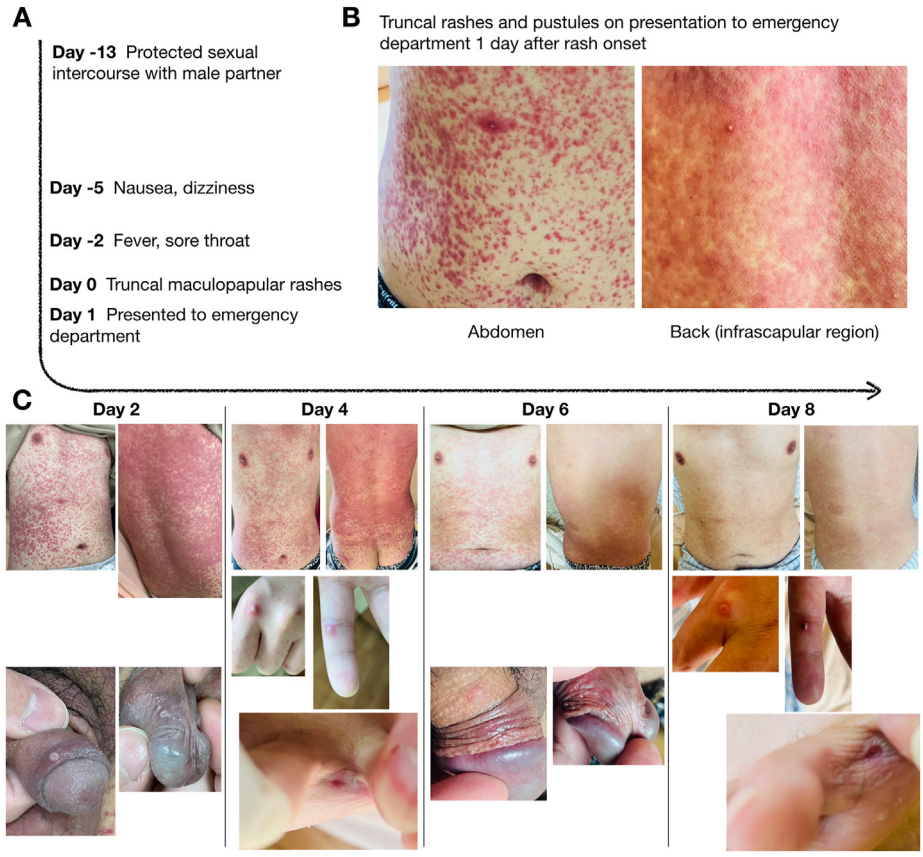

Figure 1. (A) Timeline of possible exposure, development of symptoms, and emergency department visit for a 33-year-old male with locally-acquired mpox. (B) Close-up of the patient's rashes and pustules on the abdomen (left), and left infrascapular area (right) 1 day after onset of systemic rashes. The lesions were nonblanchable, erythematous, confluent maculopapular rashes which is slightly raised. Scattered pustules measuring 1.0 × 1.0 mm were noted on right upper abdomen (left) and below the scapular (right). (C) Progression of cutaneous lesions during mpox course of the patient. Days since rash onset are indicated. Truncal rashes appear to develop in a centrifugal pattern. Central-umbilicated pustules were found on the penile prepuce (bottom of first panel). Fluid-filled vesicles on his left knuckle and fifth finger were observed, while an ulcer was noted on his left plantar interdigital web space (second panel). Truncal lesions evolved into hyperpigmented, scaling macules 1 week after onset. On day 6, umbilicated pustules on the penile prepuce progressed into indurated erosions with an erythematous base. The vesicle on his left knuckle had crusted, a scab was found on the left fifth finger, while the plantar ulcer was observed to have slightly re-epithelialized but with 2 satellite lesions on the plantar aspect on day 8.

nonreactive. Detection of *Streptococcus pyogenes* by aerobic culture of a throat swab was negative, while nucleic acid amplification for measles virus obtained from urine and throat swab were negative. Qualitative detection of MPXV via polymerase chain reaction from pustular fluid of his penile prepuce and throat swab, performed at the reference laboratory of Taiwan Centers for Disease Control using methods described previously,[4] returned positive.

Pain control was given during hospitalization. Rashes on his trunk resolved 1 week after onset with residual hyperpigmentation and scaling. Vesicles on his left arm and foot started crusting and scabbing 8 days after presentation. Penile prepuce pustules evolved to an indurated erosion on day 6 (Fig. 1C).

Our report highlights the asynchronous nature and atypical progression of mpox lesions during the current outbreak. Unlike previous outbreaks, cutaneous lesions may present at different stages simultaneously, and not all lesions progress in the typical order of macules, papules, vesicles, pustules, and scabs,[5] as seen in our patient who presented 1 day after rash appearance. Minimal prodromal symptoms and scanty rashes easily concealed by clothing could be challenging for timely diagnosis.[1,5] Disseminating awareness of subtle and atypical presentations is vital as failure to recognize mpox infection may pose risks to healthcare workers and contacts.

Declaration of competing interest

The authors declare no conflicts of interest.

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