Perianal Vesiculo-pustular Eruptions in a 28-year-old Male: A Quiz

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A 27-year-old male presented with pain and itching sensation in the peri-anal region for 7 days. In addition to secretion of mucous from the anus, he reported pain in the inguinal region on both sides. Except for a sore throat, he was otherwise healthy and did not take any medication on a regular basis. The patient identified as a man who has sex with men (MSM), stating that his last protected sexual activity with a random male acquaintance was 5 days prior to onset of the (peri)anal symptoms. Urethral discharge, dysuria, fever, and other constitutional symptoms were denied. On the first clinical examination, multiple partially oozing vesiculo-pustular lesions were observed in the perianal region. A solitary ulcer of small size close to the anus at 12 o'clock lithotomy position and a solitary erythematous papule 4 mm in diameter in the popliteal cavity were detected. Enlarged lymph nodes (approximately 2 cm longitudinal diameter) in the inguinal region were palpable on both sides. A multiplex PCR for relevant bacterial, viral and parasitic pathogens was performed from the anal region and urethra. Serological analysis was performed for exclusion of HIV, hepatitis B and C, and syphilis. Due to constitutional symptoms a blood count was performed. Leucocytes were in the normal range and C-reactive protein (CRP) was slightly elevated (12 mg/L, normal range 0–5 mg/L). Valaciclovir, 100 mg twice a day, and ex-juvantibus doxycycline, 100 mg twice a day, for 7 days were prescribed. Due to worsening of his clinical condition (increasing painful sensation in the anorectal region, multiplying of lesions) he presented again 3 days later. Clinical examination showed a transformation to vesiculo-pustular, umbilicated papules as well as spreading of the lesions to the upper and lower extremities (Fig. 1).

What is your diagnosis?

Differential diagnosis 1: Monkey pox virus infection
Differential diagnosis 2: Impetiginized herpes variants
Differential diagnosis 3: Lymphogranuloma venereum
Differential diagnosis 4: Molluscum contagiosum

See next page for answer.

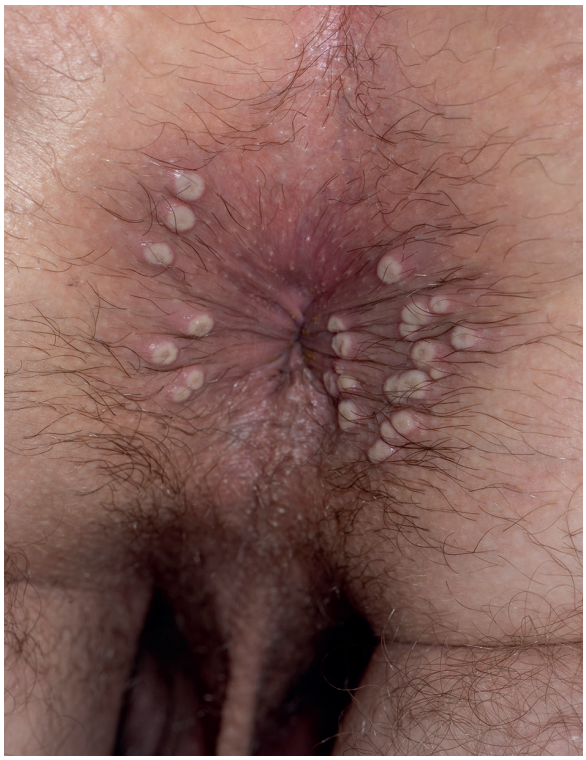

Fig. 1. Multiple, pea-sized, partly umbilicated pustules in the perianal region.

ANSWERS TO QUIZ

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Diagnosis: **Human monkey pox virus infection (MPox)**

The human monkey pox virus is a zoonotic disease caused by an Orthopoxvirus. The virus has been detected in various animals, including squirrels, Gambian Norway rats, dormice, and several species of monkeys, among others. The first human infection was reported in 1970 in the Democratic Republic of the Congo. Since 1970 the incidence of infections have been increasing (1–3). The 2022 outbreak is the first in multiple non-endemic countries, and the World Health Organization (WHO) reported 85,919 cases of Mpox and 92 deaths in 110 affected countries (1, 4). Transmission is reported to be human-to-human via body fluids, skin lesions, mucosal surfaces and, probably, respiratory droplets, or, indirectly, via contaminated objects (3, 5). Of the cases including reported sexual orientation, 84.4% of patients identified as MSM (1).

The disease is characterized by pustular, often umbilicated papules, which may last for 2–4 weeks. The incubation time is 5–21 days. Symptoms such as fever, headache, tonsillitis, cough, myalgia and fatigue may precede the pustules. Lymphadenopathy occurs frequently (2, 3, 5). In the current case the suspected diagnosis was initially impetiginized genital herpes (constitutional symptoms, multiple, painful vesicular lesions, lymphadenopathy) and, in addition, lymphogranuloma venereum could not be ruled out (MSM, lymphadenopathy, ulcer at perianal region, proctitis-like symptoms). Negative multiplex PCR from the first visit of other relevant sexually transmitted infections (STIs) and worsening of clinical symptoms made MPox infection highly likely. The infection was verified via PCR analysis. Histopathological analysis was not performed in the current patient; however, it might be useful, especially to exclude differential diagnoses. The following diseases may also be considered for differential diagnosis: pyodermia (painful pustules, constitutional symptoms), impetigo (papules, possible spreading, lymphadenopathy), hand foot mouth disease (painful papules or pustules, constitutional symptoms), syphilis (localized papules, lymphadenopathy, constitutional symptoms), lymphogranuloma venereum (ulcerated papule, lymphadenopathy, painful lesions), infection with human-pathogenic herpes variants, mainly herpes genitalis (painful vesicles, lymphadenopathy, constitutional symptoms) caused by herpes simplex viruses 1 and 2, but also varicella zoster virus (VZV) (chickenpox), molluscum contagiosum (umbilicated papules) or disseminated histoplasmosis (polymorphic eroded or ulcerated papules and plaques) (3, 4, 6).

The vast majority of Mpox cases follow a mild course. Complications, although rare, can be secondary infections, bronchopneumonia, encephalitis and keratitis (3, 5). Most symptoms resolve spontaneously, therefore only requiring symptomatic treatment, as observed in this case. Soothing and antiseptic topical treatment, as well as systemic analgesics (dexibuprofen 400 mg tablets, as needed) were prescribed. For more severe cases, administration of antiviral drugs, such as tecovirimat, brincidofovir, cidofovir or intravenous vaccinia immune globulin, is possible and might be discussed in severely immunosuppressed patients early on (5, 7). The current patient was young, had no comorbidities or any immunodeficiency; therefore inpatient treatment was not necessary. Furthermore, quarantine was imposed by the local department of health.

One method for prevention of infection is smallpox vaccination (first-generation smallpox vaccine). This reportedly provides 85% cross-protection against MPox(4). Newly developed vaccines can also be used for post-exposure prophylaxis within 4 days after contact (8). In Germany, the Robert Koch Institute recommends vaccination against MPox for individuals with an increased risk of exposure and infection (e.g. MSM, medical or laboratory personnel, etc.) (9). Patients with a higher risk of severe disease progression are people with acquired immunodeficiency syndrome (AIDS) or any other type of relevant immunosuppression. In these cases, starting antiviral therapy early on should be considered, even before severe manifestations are observed. Smear test collection should therefore be performed as soon as possible in suspected cases, in order to spare unnecessary ex-juvantibus therapies and to initiate antiviral therapy immediately. Furthermore it is recommended that all patients with suspected MPox should be tested for HIV and other STIs (7).

At the start of the outbreak of 2022, it could not be ruled out that Mpox would cause high numbers of infection, and thus have an impact on the entire population. Due to the COVID-19 (SAR-CoV-2) pandemic, the fear of another pandemic was palpable. However, with rapid provision of information for those at risk, and vaccination, a rapid decrease in cases was observed after the peak at week 29 in July 2022. In EU/EEA countries there was a decrease in newly reported cases of 99.2% (from week 29 to week 49) (10).

This case report highlights possible pitfalls in diagnosing Mpox. Clinical presentation can be ambiguous; hence Mpox should be considered whenever specific clinical symptoms are present.

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