A Dome-Shaped Eyelid Nodule in a Young White Man

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A 27-year-old White man presented with a recent onset of malaise, chills, night sweats, and sore throat with difficulty swallowing. He also reported redness of his right eye with watery discharge. He developed a skin rash affecting his trunk, limbs, and genitalia within the previous week. His medical history was noncontributory, except for allergic rhinitis, for which he was prescribed fexofenadine pro re nata. His visual acuity was 6/6 in both eyes. Examination of his right eye revealed erythematous swollen eyelids. A slightly raised dome-shaped umbilicated nodule, of approximately 3 mm, was present on his medial one-third lower eyelid margin, with a similar lesion developing on the corresponding upper eyelid margin (Figure). A vesicular lesion was also present on the caruncle and there was global conjunctival hyperemia, mostly pronounced nasally and around the lesions (Figure, B). There were no signs of corneal involvement, and the anterior chamber was quiet. The left eye was normal. Results of fundus examination in both eyes were normal. No preauricular or submandibular lymph node involvement was noted, but cervical lymph nodes were enlarged. The pharynx was erythematous and swollen with white pus patches. The skin lesions were dome-shaped papules, round, pinkish-white in color, surrounded by an erythematous area. Full blood cell count and tests for HIV, AIDS, and syphilis were ordered. Conjunctival swabs and eyelid vesicle fluid were taken for polymerase chain reaction testing. Swabs of the upper respiratory tract were also taken.

WHAT WOULD YOU DO NEXT?

A. Isolate the patient and notify public health authorities
B. Administer imiquimod
C. Perform lesion excision by unroofing and curettage
D. Administer oral acyclovir

Quiz at jamacmelookup.com
Diagnosis

Ocular manifestation of Monkeypox infection

What to Do Next

A. Isolate the patient and notify public health authorities

Discussion

A 2022 outbreak of human monkeypox (HMPX) has recently gained global attention. As of July 1, 2022, there were 5783 total confirmed cases in 52 locations, the majority of whom were reported in Europe, with 1235 confirmed cases in the United Kingdom. A few different variants have been detected. Most of cases occurred in young men after close contact with infected individuals.1

HMPX is a zoonosis caused by infection with the Monkeypox virus, an Orthopoxvirus of the Poxviridae family. The disease was first described in central Africa2 in 1970 and has historically affected some of the poorest communities in the world,3 being rarely exported from the African continent.4 Commonly reported clinical features include fever, headache, muscle aches, backache, swollen lymph nodes, chills, exhaustion, and a skin rash, characterized by pimple- or blisterlike lesions that appear on the face, hands, feet, chest, genitals, or anus. The illness typically lasts 2 to 4 weeks. Complications include pneumonia, encephalitis, and secondary bacterial infections.4,5

There are only a few reports of ocular involvement (ie, conjunctivitis and sight-threatening keratitis) reported in Africa. An abstract presentation6 published in 2014 reported that conjunctivitis was found in 68 monkeypox cases (23.1%) in the Democratic Republic of Congo. Patients with conjunctivitis were at high risk for developing a sight-threatening keratitis. However, no further details were provided about the features of the conjunctival and corneal involvements.6

To our knowledge, the present case may represent a case of eyelid and conjunctival involvement during the HMPX outbreak. Although no serologic testing was performed, the eyelid swab and vesicle fluid were PCR positive for orthopoxvirus and monkeypox DNA. Our finding suggests that, in the presence of an eyelid nodule with conjunctival inflammation, the diagnosis of HMPX should be considered and public health authorities should be alerted (choice A). A systemic workup is warranted to exclude systemic involvement of the disease.

The clinical differential diagnosis includes molluscum contagiosum (MC), syphilis, herpetic and bacterial infections, and skin cancers. Imiquimod (choice B), an immune response modifier, is currently approved for the treatment of actinic keratosis, superficial basal cell carcinomas, and anogenital warts. It is used off-label for MC, herpes simplex virus, and other cutaneous disorders. However, this drug is not used to treat Monkeypox infections. Likewise, physical removal of the lesions (choice C) is a common treatment for MC lesions,7 but it is not recommended for HMPX lesions. Oral acyclovir (choice D) is used to treat herpetic infections,8 but it is not indicated for HMPX.

Currently, there are no licensed treatments for human monkeypox. Two drugs, brincidofovir and tecovirimat, have demonstrated efficacy against orthopoxviruses, including monkeypox, in animal models and may be used to treat HMPX infections, especially in patients with severe symptoms and immunocompromised immune system.1

The reported prognosis of HMPX varies substantially and is vulnerable to case ascertainment bias. The case fatality ratio has historically ranged from 3% to 10% and has been higher among young children and immunocompromised individuals. In recent times, the case fatality ratio has been around 3% to 6%.

Vaccines used during the smallpox eradication program also provided protection against monkeypox. Newer vaccines have been developed, of which one has been approved for prevention of monkeypox.9 Health care professionals should be aware that patients presenting with conjunctivitis and eyelid lesions might be infected by monkeypox virus.

Patient Outcome

The patient was admitted in isolation. A treatment with oral tecovirimat (600 mg twice daily) was prescribed with remarkable improvement of the ocular and skin conditions within 10 days.

ARTICLE INFORMATION

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REFERENCES