Letters

OBSERVATION

Ocular Pox Lesions in a Male Patient With Monkeypox Treated With Tecovirimat

Monkeypox is a double-stranded DNA virus within the Orthopoxvirus genus. The first human outbreak was reported in the years 1996 to 1997 in the Democratic Republic of the Congo. Monkeypox can be transmitted via bodily fluids, blood, infected lesions, or respiratory droplets. The infection is usually self-limited, lasting 2 to 4 weeks. Along with cutaneous and systemic findings, ocular manifestations include conjunctivitis, eyelid edema, keratitis, corneal scarring, and conjunctival lesions. Herein, we describe a case of ocular pox lesions in a male individual successfully treated with tecovirimat, an expanded-access investigational therapy, and conservative ocular management.

Report of a Case | A 30-year-old male individual unvaccinated against monkeypox with no significant medical history and a positive sexual history with males developed mild congestion and cough. His medication history consisted of emtricitabine/tenofovir for HIV prophylaxis. Two days after the initial symptoms, he developed penile papular lesions. Examination revealed lesions on the hands, shoulders, and back. He tested positive for SARS-CoV-2. Monkeypox DNA polymerase chain reaction testing from a genital swab was positive. He was admitted to the hospital for progressive pain. Upper respiratory infection symptoms resolved. Ophthalmologic consultation was obtained for similar-appearing lesions on the eyelid and conjunctiva of the right eye.

Visual acuity was 20/20 OU. Pupils were round and reactive to light with no afferent pupillary defect. Intraocular pressure was 12 mm Hg in the right eye and 14 mm Hg in the left eye. Exudative movements, confrontational visual fields, and color plates were full in both eyes. There was no preauricular lymphadenopathy. Anterior-segment examination revealed trace injection with a 3 × 2-mm ulcer on the right lower palpebral conjunctiva, a 2 × 2-mm ulcer on the right caruncle (Figure 1), and a 3 × 3-mm papule on the right upper eyelid (Figure 2). Corneas were clear bilaterally. The anterior chamber was not examined for inflammation. Dilated fundus examination was unremarkable.

Ocular lesions were not swabbed as they were similar in appearance both to the genital lesions and those described in the literature. HIV test results were negative. Tecovirimat, 600 mg, administered twice daily was initiated on admission and continued for 14 days, as well as artificial tears given every 4 hours and erythromycin ointment 4 times daily to the right eye. After 4 days, the conjunctival and caruncular lesions resolved. The upper eyelid margin lesion flattened and became red. Eye irritation resolved. Genital lesions developed eschars, superficial bloody erosions, and decreased erythema. No new lesions developed. The patient was discharged on day 6 of treatment without adverse effects.

Discussion | Currently, there is no guidance on the treatment of ocular manifestations of monkeypox. In patients with orthopoxviral infections in the US, topical trifluridine has been used, though efficacy in monkeypox has not been established. In a recent case in the UK, a patient presented with anal and skin vesicles, proctitis, and conjunctivitis with a vesicle on the lower eyelid and an ulcer on the medial bulbar conjunctiva of the left eye.

Figure 1. Palpebral Conjunctival and Caruncular Lesions

Clinical photograph showing palpebral (white arrowhead) and caruncular (black arrowhead) lesions before (A) and 4 days after (B) treatment with tecovirimat.
He was treated with topical neomycin, polymyxin B, and dexamethasone. The ocular and cutaneous lesions resolved after 3 weeks, though the conjunctivitis remained. It is unclear if this treatment caused resolution of the lesions.

Tecovirimat can be considered in patients with severe monkeypox disease. Animal studies have shown decreased mortality when the drug is given early. Case series in humans suggest that the drug may shorten illness duration. In a series of 7 patients with confirmed monkeypox in the UK, 3 were treated with brincidofovir, and 1 was treated with tecovirimat. In the tecovirimat-treated patient, there was a more rapid clinical and virologic improvement compared with the brincidofovir group, although this study could not attribute this difference in response to the tecovirimat.

The current case demonstrates improvement of ocular pox lesions shortly after initiating tecovirimat and conservative ocular therapy. However, this single observation cannot determine with any reasonable degree of certainty whether similar improvement would have been seen in the absence of this treatment. As experience with ocular involvement increases, definitive therapies may be established.

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