Subconjunctival Mycetoma as an Unusual Cause of Tears With Black Deposits

Ocular mycosis is a rare condition that is usually related to ocular trauma, preexisting ocular disease, or immunocompromised states. We report a case of subconjunctival mycetoma secondary to Exophiala dermatitidis in a healthy middle-aged woman with recalcitrant ocular inflammation and black deposits in her tears.

Report of a Case. A 44-year-old woman had recurrent discharge from her right eye and black deposits in her tears for 2 years. Her symptoms persisted despite the use of topical antibiotics, steroids, and antihistamine. She was otherwise healthy and was not receiving any systemic or other topical medication. She denied any history of ocular trauma or surgery. She did not use contact lenses or eye makeup.

On examination, her general condition was excellent. Her visual acuity, intraocular pressure, and fundi were all normal. There was no eyelid swelling or erythema. On everting the right upper eyelid, some subconjunctival black deposits were noted (Figure, A). During biopsy, the conjunctiva was incised and multiple black, mulberry-like concretions extruded with mucoid discharge (Figure, B). Topical chloramphenicol, 0.5%, with dexamethasone sodium phosphate, 0.1%, eyedrops were prescribed postoperatively. Histopathological evaluation of these concretions showed large amounts of fungal hyphae (Figure, C and D) with chronic inflammation over the conjunctiva. The diagnosis was subconjunctival mycetoma. Initial culture results for fungal growth were negative, but further evaluation with 28S ribosomal RNA gene sequencing identified the causative organism as E. dermatitidis. At subsequent follow-up visits, the patient had complete resolution of symptoms. Topical antifungal treatment was not given as she was asymptomatic and there was no recurrence of mycetoma at month 3 after debridement.

Comment. Tears with black deposits are extremely rare. In our case, we initially thought the black deposits were either foreign bodies or adrenochrome deposits, but they proved to be shedding from the subconjunctival mycetoma. Patients with tears with black deposits should therefore be evaluated for the presence of subconjunctival mycetoma. A similar clinical entity termed "melanodacyrorrhoea" (black tears) is caused by extrabacterial extension of uveal melanoma.1 In immunocompetent subjects, fungal infection can remain superficial and localized as illustrated in our case. Subconjunctival mycetoma has been reported after subtenon corticosteroid injection in an immunocompromised host2 and in an immunocompetent woman with no risk factors, similar to our patient.3 The Exophiala species are dematiaceous mold commonly recovered from soil, plants, water, and decaying wood materials. This strain of black yeasts has been reported to cause deep infection (especially in the lung), cutaneous infection involving the skin and mucous membranes, and subcutaneous infection manifested as mycetoma.4 E. dermatitidis has been described as the causative agent in fungal keratitis that occurred after keratoplasty5 and laser in situ keratomileusis,6 but to our knowledge it has not been reported to cause subconjunctival mycetoma.

Treatments described for subconjunctival mycetoma are diverse, ranging from aggressive topical and systemic antifungal treatments following surgical intervention7 to surgical debridement alone.8 A study by Zeng et al9 evaluated the activity of amphotericin B, itraconazole, voriconazole, and posaconazole against E. dermatitidis and reported that all 4 antifungal agents have low minimum inhibitory concentrations (range, 0.03-0.5). However, data on correlation between in vitro and in vivo susceptibility are unavailable.
In summary, we describe an immunocompetent woman with tears with black deposits caused by subconjunctival mycetoma, the causative fungus having been identified as *E. dermatitidis*.

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**Author Contributions:** Dr Li had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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**Inadvertent Vitreous Staining With Trypan Blue in Pseudoexfoliation Syndrome**

Trypan blue is commonly used for anterior capsular staining during cataract surgery. Although this technique is safe,1 vitreous staining with trypan blue during cataract surgery has been reported in patients with history of trauma.2-4 Here we report a case of vitreous staining with this dye during phacoemulsification in an eye with pseudoexfoliation syndrome without clinically noticeable zonulysis.