

## External ophthalmomyiasis due to *Oestrus ovis*

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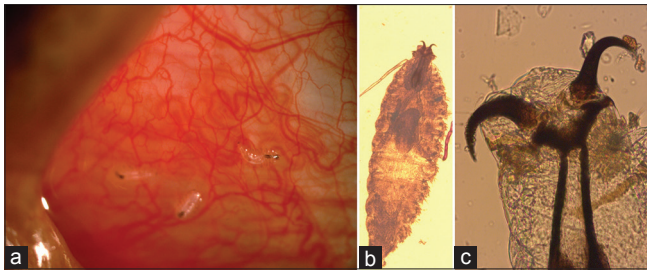
### Case Report

A 58-year-old male presented with redness and irritation in the right eye for a week. His best-corrected visual acuity (BCVA) was 6/6 in both eyes. He denied any history of foreign body entry into the eye, contact with livestock or recent history of swimming. Slit-lamp examination of the right eye revealed hyperemia of the bulbar and palpebral conjunctiva, quiet anterior chamber and a clear cornea. There were multiple spindle-shaped translucent larvae wriggling over bulbar conjunctiva and tarsal conjunctiva [Fig. 1a]. They were trying to disappear towards fornices on shining the slit-lamp light. Under slit-lamp, total

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**Figure 1:** (a) Slit-lamp photograph (magnified) view of conjunctiva near lateral canthus showing three first instar larvae of *Oestrus ovis* (b) Microscopic photograph of a first instar larva of *Oestrus ovis* (c) Anterior end of larva equipped with cephalopharyngeal skeleton showing two large dark sharply curved oral hooks, hypopharyngeal sclerites and elongated rod-shaped pharyngeal sclerites

eight larvae were removed with the help of forceps under topical anaesthesia. It is worth mentioning was noted that removal with cotton-tipped applicator was not successful as the larvae tend to attach tightly to the conjunctiva. All these larvae were put in normal saline and in 70% alcohol and were sent to laboratory. He was started on a topical anti-microbial agent (ciprofloxacin 0.3%). Microscopic examination revealed spindle-shaped skeleton with a pair of sharply curved fuscous brown oral hooks at the anterior end [Fig. 1b and c]. Based on the morphology, they were identified as first instar larvae of *Oestrus ovis*.

## Discussion

*Oestrus ovis*, commonly known as sheep nasal botfly, is a worldwide parasite that usually infests the nasal cavity and paranasal sinuses of sheep, goats, cattle and horses.<sup>[1]</sup> Humans are the accidental hosts and *Oestrus ovis* larvae have been mainly reported to cause external ophthalmomyiasis by various authors.<sup>[1-3]</sup> External ophthalmomyiasis due to *Oestrus ovis* usually manifests with conjunctivitis-like clinical picture.<sup>[4]</sup> These larvae have been reported to cause significant conjunctival eosinophilic infiltrations leading to non-necrotising granulomatous inflammation and eosinophil degranulation which can further lead to epithelial cell damage and goblet cell secretion.<sup>[5]</sup> Thus, presentation with itching, foreign body sensation and a watery-mucopurulent discharge

is not uncommon and disease can easily be misdiagnosed as conjunctivitis.<sup>[4]</sup> *Oestrus ovis* larvae are unable to penetrate cornea or sclera as they lack the ability to secrete proteolytic enzymes.<sup>[5]</sup> However, *Oestrus ovis* larvae have been reported to present with keratitis<sup>[6]</sup> and keratouveitis.<sup>[7]</sup> Thus, early removal of the larvae is very important in patients with external ophthalmomyiasis.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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