

Ophthalmomyiasis Externa Caused by *Oestrus ovis*

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ABSTRACT

A 50-year-old male presented with foreign body sensation, pain, and redness in left eye. Slit-lamp biomicroscopy revealed tiny larvae crawling around the conjunctival sac. The larvae, numbering 13, were mechanically removed under topical anesthesia and identified under light microscope as first-stage larvae of *Oestrus ovis* causing ophthalmomyiasis externa.

Keywords: *Oestrus ovis*, larvae, ophthalmomyiasis externa

INTRODUCTION

Ophthalmomyiasis, infestation of the eye with insect larvae, is known to occur in parts of Asia and North Africa.^[1] Myiasis is an infection of tissue and organ of animals or man by fly larvae.^[2] The common site of infestation is the skin wound. Less common sites are eyes, nose, paranasal sinuses, throat, and urogenital tract. Ocular involvement occurs in about <5% of all cases of human myiasis.^[2] Infestation in human is through penetration of intact skin, orbit, or nasal cavities. Ophthalmomyiasis is classified as ophthalmomyiasis externa if the larvae are present on the conjunctiva and ophthalmomyiasis interna when there is intraocular penetration of larvae.^[2] Here, we report a case of ophthalmomyiasis externa due to *Oestrus ovis*.

CASE REPORT

A 50-year-old male, farmer by occupation, presented to the ophthalmology outpatient department with a 2-day history of foreign body sensation, burning,

redness, and excessive watering from his left eye, following something falling into his eye while working at fields. He gave no past history of ocular or medical problems.

On examination, his visual acuity was 20/20 in both eyes. Eyelids of the affected eye were absolutely normal. The conjunctiva was mildly congested with profuse lacrimation. Extrocular movements were full. On slit-lamp examination, tiny, translucent worms, 1–2 mm in size, with dark heads and crawling over the bulbar conjunctiva were seen. Pupillary reaction was normal. Direct and indirect ophthalmoscopy showed no evidence of intraocular organism or inflammation. Examination of his right eye was normal. Using 4% xylocaine drops as topical anesthesia, 13 worms were removed manually with the help of forceps.

On macroscopic examination, these worms were milky white maggots of about 2 mm in length. Microscopy revealed spindle-shaped skeleton with multiple segments and intersegmental spine bands [Figure 1]. A pair of sharp, dark brown oral hooks was attached to the internal cephalopharyngeal skeleton and tufts of numerous brown hooks were on the margins of each body segment. They were identified as the first-stage larvae of *O. ovis*, the sheep nasal bot fly.^[3,4] The patient was treated with topical antihistaminic drugs and antibiotics. During the follow-up after 3 days, the patient was completely relieved of his symptoms. A repeat slit-lamp examination of the anterior segment and fundus was normal.

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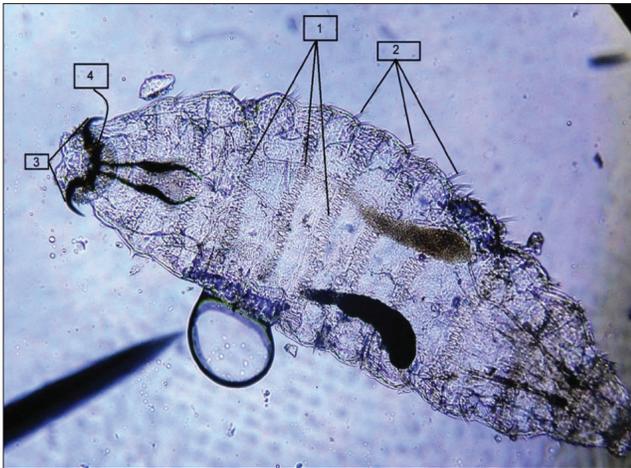


Figure 1: *O. ovis* larvae (x400) showing segments with intersegmental spine bands (1), tufts of brown hooks on the margins of each body segment (2), oral hooks (3), and oral hooks seen attached to the internal cephalopharyngeal skeleton (4)

DISCUSSION

Ophthalmomyiasis due to *O. ovis* was described for the first time in 1947 by James.^[2] Myiasis in man is generally rare, seen among people where the standard of hygiene is low and there is abundance of flies around the locality.^[3,4] Cattle, sheep, horse, deer, and rodents are the natural hosts.^[2] Man is an accidental host. However, the tiny larvae do not develop any further in the human eye.^[3] The condition is self-limiting and the disease is confined to the conjunctiva. A case of destructive orbital myiasis due to *O. ovis* was reported from India.^[5] However, none of these complications were encountered in our patient. It may be due to short history of 2 days duration and prompt treatment.

Several such cases have been reported from different parts of India in the past.^[4,6,7] Similar case was reported from this region three decades earlier.^[8] It is alarming that such infestation is emerging once again after a long pause in this area. The probable reason needs to be analyzed, whether it

is negligence, ignorance, or lack of documentation. Most of the cases of ophthalmomyiasis externa are seen during the cooler months of the year in sheep-rearing enzootic areas.^[9] The case reported here was also affected in the winter season, from a sheep-rearing area.

CONCLUSION

O. ovis ophthalmomyiasis does not seem to be widely known and the diagnosis may often be missed. Irrigation of the conjunctiva with normal saline is unsuccessful in washing out the larvae because the larvae grab the conjunctiva firmly with the help of oral hooks and numerous hooks on their segments.

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