




CASUISTIC PAPER

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External ophthalmomyiasis by sheep botfly – a report from Sirmaur hills

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ABSTRACT

Introduction. Myiasis is caused by larvae of flies infesting animal or human tissues and organs.

Aim. In this report we present 2 cases of external ophthalmomyiasis by sheep botfly.

Description of the cases. We report a case of two patients who presented with a history of foreign body sensation in the left and the right eye respectively. Slit lamp examination revealed larvae of *Oestrus ovis* (sheep botfly). In both cases, there was no contact history with sheep or goats. Signs of conjunctival inflammation and corneal involvement were absent in both cases. In most of the previous reports, corneal and conjunctival inflammation was present.

Conclusion. Treatment for external ophthalmomyiasis is based on larvae removal and application of topical antibiotics and steroids.

Keywords. myiasis, ocular, signs

Introduction

Myiasis is the invasion of dipterian fly larvae in humans or animals (living or dead).¹ It can occur on any exposed part of the body but has also been reported to involve the intestine, bones and the urogenital tract.² Animals such as sheep are the natural hosts of the fly *Oestrus ovis* and humans are an accidental host. Other species that cause human myiasis are *Dermatobia hominis* (human botfly) and *Cordylobia anthropophaga* (tumbu fly).³

Aim

In this report we present 2 cases of external ophthalmomyiasis by sheep botfly.

Description of the cases

Case 1.

A 25-years-old immuno-competent male presented to the ophthalmology department with a history of foreign body sensation in the left eye for the past two days. There was no other ocular complaint nor any other significant history. He was a teacher by profession. There

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was no significant medical, surgical, family, traumatic or other drug intake history. Routine ocular examination was carried out and his visual acuity was 6/6 in both the eyes; pupillary reactions, ocular movements, fundus and intraocular pressure were within normal limits. On gross torch light examination, the left eye looked normal (fig.1.) until slit lamp examination was performed which revealed a barely visible multiple, translucent larvae over the upper palpebral conjunctiva, around 1 mm in length.



Fig. 1. Slit lamp examination of eye of first patient

The larvae were removed with sterile cotton buds under topical proparacaine eye drops, mounted on a glass slide and sent to microbiology department for identification. The specimen was identified as the larvae of *Oestrus ovis* (the sheep nasal botfly) (fig.2.). It had the characteristic spindle shape, segmented body along with a pair of darkly colored sharp, oral hooks at the anterior end. Surprisingly, our patient did not have any conjunctival congestion or corneal signs. We prescribed him topical moxifloxacin+ketorolac eye drops. His complete blood count and blood sugar was within normal limits. He was asymptomatic from the very next day.



Fig. 2. Larvae of *Oestrus ovis*

Case 2.

A 22-year-old female was admitted to the emergency department with symptoms of foreign body sensation in the right eye for the past one week. She was a housewife. There was no significant medical, surgical, family, traumatic or other drug intake history. Routine ocular examination was carried out and her vision was 6/6 in

both the eyes; pupillary reactions, ocular movements, fundus and intraocular pressure were within normal limits. Slit lamp examination revealed multiple translucent larvae over the right palpebral conjunctiva (fig.3.). The larvae were removed with sterile cotton buds under topical proparacaine eye drops, mounted on a glass slide and sent to microbiology department for identification. The specimen was identified as the larvae of *Oestrus ovis*. Surprisingly, the patient did not present any conjunctival congestion. We prescribed her topical moxifloxacin+ketorolac eye drops. Her complete blood count and blood sugar was within normal limits.



Fig. 3. Slit lamp examination of eye of second patient

Discussion

Oestrus ovis is a common cause of myiasis in humans. Its larva cannot survive beyond the first larval stage in humans and are believed to die within ten days if not removed.⁴ Ophthalmomyiasis is classified into two types. Ophthalmomyiasis externa has conjunctival involvement while ophthalmomyiasis interna is the term used if there is an intraocular penetration of the larvae. Cases are commonly reported in farmers and shepherds especially during spring and summer. Ocular findings can be in the form of acute catarrhal conjunctivitis, and if untreated, can lead to corneal ulcer, endophthalmitis, iridocyclitis and even blindness.⁵

Shepherds, horse groomers, and people living in poor hygienic conditions are susceptible to infestation by the organism. Further, compromised periorbital tissues as a result of surgery, malignancy, and infection predisposes the patient to myiasis.⁶ Treatment for external ophthalmomyiasis is based on larvae removal and application of topical antibiotics and steroids.⁷ Timely diagnosis and treatment prevents serious complications associated with this disease.

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