CASE REPORT

Ophthalmomyiasis Caused by Sheep Nasal Botfly (*Oestrus ovis*)

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ABSTRACT

Ophthalmomyiasis is a parasitic eye infection. A young male went on a picnic with his family. After sudden blow of wind, he had a feeling of something struck in the eye, which quickly became swollen with severe itching and lacrimation. A total of 19 larvae in their instar stage were removed with fine forceps under topical anesthesia and slides were prepared for their identification, which came out to be *Oestrus ovis* belonging to Oestridae family. Recently, cases are being reported from rural and urban areas of Sindh. Doctors in ER (Emergency Room) and ophthalmologists should be aware that whenever next time they see a patient with red eye conjunctivitis, ophthalmomyiasis should always be on their list of differentials.

Key Words: *Opthalmomyasis externa. Nasal botfly. Oestrus ovis.*

ΩINTRODUCTION

Ophthalmomyiasis due to larvae infestation of *Oestrus ovis* getting common in coastal city of Pakistan. Though it is a rare parasitic infestation worldwide, but recently cases are being reported from different parts of the province of Sindh, Pakistan. First case report of two cases from Sindh, Pakistan was published in 2006.[1] After this, another case report was published in 2014 from Karachi, Pakistan.[2]

We report yet another case of ophthalmomyiasis externa in a young male from Karachi, Pakistan. These increasing cases of ophthalmomyiasis externa from the same location is giving a message that whenever patient presents with the red eye, ophthalmomyiasis externa should be considered as one of the differentials.

CASE REPORT

A young male resident of Karachi, Pakistan belonging to good socioeconomic class, went for a picnic on Hawks-bay, a sea-side in Karachi, with his family. While he was wandering near the sea, suddenly a gush of wind along with sand and dirt struck his right eye. After which, he felt foreign body sensation in his eyes, which initially he thought was sand and dirt. After washing his eye thoroughly with water, the symptom did not improve but instead lacrimation, foreign body sensation and itching got worsened. Thus he presented to the emergency department of Dr. Ziauddin Hospital. He had no prior history of occulopathy and presented with red eye along with above mentioned symptom. The ophthalmological examination revealed no loss of visual acuity but with mild congested conjunctiva. Upon slit lamp examination of conjunctiva, larvae was revealed, removed with forceps, and eye was irrigated thoroughly with saline and the symptom improved after due procedure.

At most 19 larvae were removed and mounted on slides. As the young patient was a student of B.S (Bachelor of Science), Clinical Science in Ziauddin University, he brought those larvae to Department of Pathology where microscopic examination was done and larvae were identified as *Oestrus ovis* in the initial instar stage of development, commonly known as sheep nasal botfly. The larvae were characterized with a pair of sharp oral hooks, which were dark brown in color, connected with the internal cephalopharyngeal skeleton (Figure 1) and the body contained 12 segments covered with multiple spiny projections (Figure 2).

DISCUSSION

Ophthalmomyiasis externa caused by sheep nasal botfly *Oestrus ovis,* which was first described by James in 1947.[3] The life-cycle of *Oestrus ovis* actually does not

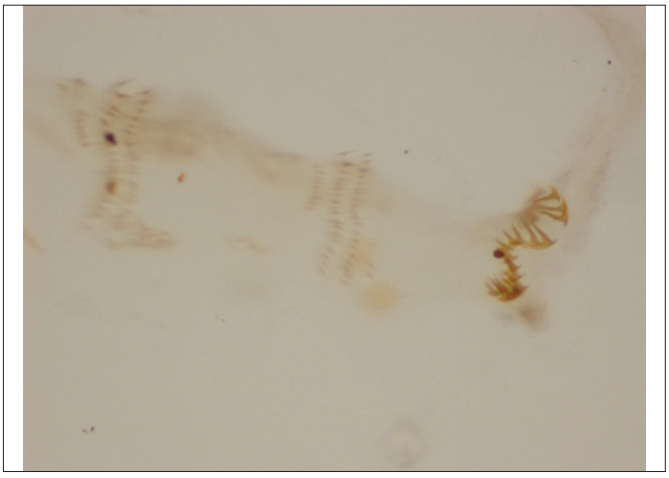

Figure 1: Shows close-up of dark pair of oral hook with which the larva attaches itself firmly with conjunctiva.

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Received: April 28, 2015; Accepted: November 13, 2015.

Figure 2: Shows picture of larva in instar stage showing a pair of oral hooks and body with 12 segments.

include human as host; rather sheep, horse, deer rodent and cattle are its host.[3] Usually, the female botfly squirts her larvae in the nasal cavity of sheep and other animals as described above and then the larvae go under different stages of development in the nasal cavity and nasopharyngeal sinuses of these animals. But sometimes accidently they inject their larvae near eyes and these larvae then cause red eye conjunctivitis to their human hosts. As larvae are in their initial stage of development, known as instar stage, these cause symptoms of having foreign body in eye, severe itching and lacrimation. Thus giving the appearance of red eye, which is usually misdiagnosed as viral or bacterial infection if not closely observed by the slit-lamp.[4] As this condition is not prevalent, ophthalmomyiasis externa is not usually in the list of causes of conjunctivitis in our clinical setup. Usually, these larvae do not develop into their later stage but are not easily removed by simple saline irrigation as they stick to conjunctiva with their oral hooks.[5] Some cases were also reported in 2011 from Libya, in which they observed that most of cases were from rural areas than urban.[6] Several cases have been reported in India; cases are also being reported in Pakistan since 2006 when the first case was reported by Ali *et al*. and another by Fasih *et al*. in 2014. It was found to occur in any season throughout the year and not necessarily having sheep around, as in this case.

It is now important to emphasize that whenever a patient presents with red eye in emergency department or to general physicians, a differential of ophthalmomyiasis should be kept in mind; especially if there is history of sudden onset with foreign body sensation in the eye. In initial cases, it is easy to manage and the symptom reverts back as soon as all the larvae are removed. Complications are although rare, but a case or destructive orbital mass was reported from India.[7]

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