



## Naso-Ophthalmic Myiasis and Pubic Louse Infestation of Nose

Kavitha Duraipandi<sup>1</sup>, Nitin Gupta<sup>2</sup>, Anjana Karunakaran<sup>1</sup>, Pratibha Kale<sup>2</sup>,  
Sabin Dhaka<sup>1</sup>, Nishant Verma<sup>2</sup>, Bijay Ranjan Mirdha<sup>2</sup>

Departments of Ophthalmology<sup>1</sup> and Microbiology<sup>2</sup>, All India Institute of Medical  
Sciences, New Delhi- 110029, India.

### Abstract:

A 15 year old girl presented to the emergency with complaints of foreign body sensation in eyes. Multiple translucent larvae were observed on the conjunctivae. A nasal cavity search also revealed similar larvae localised near the opening of nasolacrimal duct in the inferior meatus. They were identified as *Oestrus ovis*, which can affect humans causing cavitory myiasis, affecting eyes and rarely nose. In addition, presence of *Pthirus pubis* was also found in the nasal cavity. *Pthirus pubis* infestation has been reported from pubic hairs, axillary hairs, eyelashes, moustache and beard but never from the nasal cavity. This is a very rare case of concomitant ophthalmic and nasal myiasis along with pubic louse infestation of nasal cavity.

**Key words:** Foreign Bodies, Larva, Myiasis, Nasal Cavity, Nasolacrimal Duct.

### Introduction

Myiasis is an infestation of humans with dipterous larvae, commonly seen in the developing settings. Cavitory myiasis (e.g nasal and ophthalmic myiasis) is the commonest anatomical type of myiasis [1]. Most cases of human myiasis are caused by flies belonging to following families: Muscidae, Oestridae, Calliphoridae, and Sarcophagidae. *Oestrus ovis* (Sheep bot fly) belonging to Oestridae family are one of the commonest flies causing myiasis world over. The female fly may deposit hundreds of first-instar larvae at a time, mostly during the summer season. It is known that larvae of *O. ovis* usually develop in the sinuses and nasal passage of sheep in the sheep farming areas of

the world. They occasionally affect humans causing cavitory myiasis, most commonly affecting eyes [2-5]. In humans, larvae of *O. ovis* do not develop beyond the first instar stage and die within 10 days if not removed. *Pthirus pubis* infestation of pubic hairs is a common phenomenon in persons living in developing settings and is a clear indicator of poor hygiene and overcrowding. Besides pubic region, adult louse has also been reported from axillary hairs, eyelashes, moustache and beard. Here, we present an unusual case of concomitant ophthalmic and nasal myiasis along with pubic louse infestation of nasal cavity in a young individual.

**Corresponding Author: Dr. BR Mirdha**

Email: mirdhabr2078@gmail.com

**Received:** October 21, 2015 | **Accepted:** December 7, 2015 | **Published Online:** January 5, 2016

This is an Open Access article distributed under the terms of the Creative Commons Attribution License ([creativecommons.org/licenses/by/3.0](http://creativecommons.org/licenses/by/3.0))

**Conflict of interest:** None declared | **Source of funding:** Nil | **DOI:** <http://dx.doi.org/10.17659/01.2016.0001>

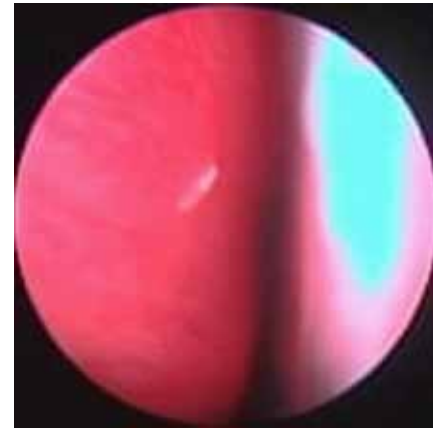
## Case Report

A 15 year old girl presented to the emergency of with complaints of foreign body sensation, watering and redness of left eye along with flushing of the face. However, visual acuity was 6/6 in both the eyes, and pupillary reflexes and ocular movements were normal. On slit lamp examination, lower punctum of the left eye was slightly everted. The conjunctiva was diffusely congested and several translucent larvae were observed on the bulbar conjunctiva, in the lower fornix and palpebral conjunctiva. The cornea, anterior chamber and fundus examination of both the eyes were within normal limits. A saline wash was given to the left conjunctival sac for about 5 minutes.

A McPherson's forceps was used to pick up and remove the larvae from the bulbar conjunctiva, lower palpebral conjunctiva, the medial and lateral canthi. Then the upper lid was everted and larvae were removed. Clockwise screening was done twice from upper fornix, lateral canthus, lower fornix and medial canthus to remove any remaining larvae. A nasal cavity search also revealed similar larvae localised near the opening of nasolacrimal duct in the inferior meatus [Fig.1]. The larvae retrieved from the eye and nasal cavity were examined microscopically. All these had an oval-shaped segmented body with prominent oral hooks connected to the internal cephalopharyngeal skeleton. These larvae were identified as the first instar larva of the sheep botfly, *Oestrus ovis* [Fig.2]. In addition, presence of an insect was also found in the nasal cavity. The examination of insect under light microscopy revealed wingless, translucent crab like lice with three pairs of legs along with claws. It was confirmed as *Phthirus pubis* [Fig.3].

## Discussion

Ophthalmomyiasis externa refers to the superficial infestation of ocular tissue where the patient presents



**Fig.1:** Rhinoscopy showing larva of *Oestrus ovis*.



**Fig.2:** Larva of *Oestrus ovis* extracted from eye.



**Fig.3:** Pubic louse removed from nasal cavity.

with complaints of acute foreign-body sensation with lacrimation whereas nasal myiasis presents as foreign-body sensation, nasal discharge and facial pain [6-8]. Although external ophthalmomyiasis is relatively common in tropical countries, there are only handful of reports of naso-ophthalmic myiasis available in published literature [9,10]. *Oestrus ovis*, besides other etiological agents has been known to cause nasal myiasis [11,12]. In the present case, it was difficult to establish whether the primary site of infection of *O. ovis* was nose or eyes. The hypothesis of primary nasal colonisation and secondary infestation of eye with larvae passing through the naso-lacrimal duct could possibly be supported by the everted punctum in the left eye. The other possibility of primary ophthalmic infestation with possible migration through the nasolacrimal duct to the nasal cavity could not be ruled out. Migration of larvae through the lacrimal canal to the nose cavity has been reported previously in published literature [9]. The only definite conclusion that could be drawn was that there was larval migration through the nasolacrimal duct from or to the eyes.

The findings of this case emphasises upon a thorough search of nasal cavity in cases of ophthalmomyiasis and vice-versa. The treatment of myiasis in most cases is mechanical removal of the larvae. In cases of ophthalmomyiasis, if only larvae is removed from the eyes and no search of nasal cavity is done, then nose may serve as the source of larvae for recurrent eye infestations. Pubic louse infestation of the nasal cavity to our knowledge has not been reported in the published literature. It is likely that questionable hygiene and poor socioeconomic condition was linked with the dual infestations.

## References

1. Zumpt F. 1965. Myiasis in man and animals in the Old World. Butterworths, London, United Kingdom.
2. Gregory AR, Schatz S, Laubach H. Ophthalmomyiasis caused by the sheep bot fly *Oestrus ovis* in northern Iraq. *Optum Vis Sci*. 2004;81:586-590.
3. Jenzeri S, Ammari W, Attia S, Zaouali S, Babba H, Messaoud R, et al. External ophthalmomyiasis manifesting with keratouveitis. *Int Ophthalmol*. 2008;29:533-535.
4. Reingold WJ, Robin JB, Leipa D, Kondra L, Schanzlin DJ, Smith RE. *Oestrus ovis* ophthalmomyiasis externa. *Am J Ophthalmol*. 1984;97:7-10.
5. Sreejith RS, Reddy AK, Ganeshpuri SS, Garg P. *Oestrus ovis* ophthalmomyiasis with keratitis. *Indian J Med Microbiol*. 2010;28:399-402.
6. González AC, Salamanca GJC, Olano VM, Pérez CE. Cavitary myiasis: case report. *Rev Fac Med*. 2008;16:95-98.
7. Madana J, Yolmo D, Gopalakrishnan S, Saxena SK, Nath AK, Ilamaram V. Hypohidrotic ectodermal dysplasia with atrophic rhinitis and nasal myiasis. *Int J Pediatr Otorhinolaryngol*. 2009;73:1467-1469.
8. Tsang WS, Lee DL. Nasal myiasis: the role of endoscopy. *Ear Nose Throat J*. 2009;88:1250-1251.
9. Eyigor H, Dost T, Dayanir V, Basak S, Eren H. A case of naso-ophthalmic myiasis. *Kulak Burun Bogaz Ihtis Derg*. 2008;18:371-373.
10. Smillie I, Gubbi PK, Cocks HC. Nasal and ophthalmomyiasis: case report. *J Laryngol Otol*. 2010;124(8):934-935.
11. Badia L, Lund VJ. Vile bodies: an endoscopic approach to nasal myiasis. *J Laryngol Otol*. 1994;108:1083-1085.
12. Lucientes J, Clavel A, Ferrer-Dufol M, Valles H, Peribanez MA, Gracia-Salinas MJ, et al. One case of nasal human myiasis caused by third stage instar larvae of *Oestrus ovis*. *Am J Trop Med Hyg*. 1997;56:608-609.