

**Indian Leech in the Superior fornix of the eye: A rare case**

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**Abstract**

Ocular foreign bodies (FBs) are often encountered in the clinical practices. However, there are cases in which the presence of the FB is difficult to diagnose based on mere history taking and/or clinical examination. We herein present a case of unusual foreign body in the left superior fornix of a 6 year old female patient. Indian leech was removed from the superior forniceal subconjunctival space in Toto with forceps under a microscope in the minor operation theater. This case emphasizes the need to elicit a complete history and a careful ocular examination with double eversion of the eyelid to avoid missing any foreign body lodged in the fornices and subconjunctival space in patients who complain of discomfort, redness, watering and foreign body sensation.

**Keywords:** Double eversion of the eyelid, ocular foreign bodies, Indian Leech (*Haemadipsa Zeylanica*).

**Case report**

A six year old female patient was referred from primary health centre to the Department of Ophthalmology, GMC Chamba with the complaints of redness, discomfort, watering and foreign body sensation in the left eye. The patient’s father revealed that the child

went with her grandmother to take a bath in a freshwater stream nearby. During the night time the patient’s left upper eyelid became swollen and congested. She complained of something moving inside the eye. The next morning parents observed redness in the left eye and the left side of her face. At the time of presentation her BCVA was 6/6 both eyes. The slit lamp examination showed congested left upper eyelid, bite mark near the lower eyelid and an itchy rash around the eye. The bulbar conjunctiva had a hemorrhagic spot nasally and congested conjunctiva (Figure1 and 2).



Figure1: Rash around the left eye and bite mark over the cheek.

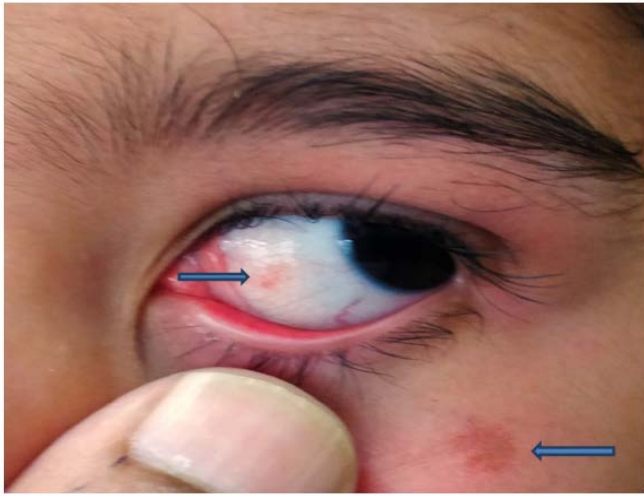


Figure 2: Conjunctival site and skin site where the leech had attached itself

The patient was shifted to the operation theater for careful examination under the microscope. The eyelid was double everted and a soft, muscular, segmented, blackish worm was noticed in the superior fornix of the left eye. 4% lignocaine was instilled in the eye twice at an interval of 3 minutes. Peristaltic locomotion of the worm was noticed. Saline water was instilled in the eye and after three attempts the worm was extracted from the superior fornix using serrated forceps (Figure 3). Antibiotic eye drops were instilled and aquatic blood sucking parasitic worm was preserved in the vial for further evaluation. The patient presented in the eye OPD after 3 days with marked relief from symptoms.



Figure 3.

## Discussion

Foreign body sensation in the eye is one of the most common symptoms encountered in the clinical practice. It frequently presents as a gritty sensation in the conjunctiva that may be puzzling when no apparent abnormality is found on slit-lamp biomicroscopic examination. Smarting, pricking sensation and grittiness are subjective sensations that may be attributed to an underlying allergic or irritative condition. At times, the origin of these presenting features may be considered psychosomatic. In either situation, being unable to arrive at a correct diagnosis, the ophthalmologist might prescribe a topical antibiotic and soothing eye bath.<sup>3</sup>

There are several reports on ocular FBs involving larvae or wings of insects, beans, seeds, wooden particles and plants.<sup>1, 2, 4, 5, 6, 7.</sup> A variety of foreign bodies may enter the conjunctival sac as it is exposed to the atmosphere.<sup>1</sup> Usually conjunctival foreign bodies are found in the fornices, superior fornix being the most common site. Other symptoms may include severe watering, twitching of eyelids, redness, photophobia and pain. In this case, we removed aquatic blood sucking soft muscular parasitic worm (Annelid of class Hirudinea) from the subconjunctival space of the superior fornix, and that too only after double eversion of upper lid under the microscope in the operation theater. Therefore, in patients presenting with watering, redness, itching and FB sensation, the possibility of superior forniceal subconjunctival FB should be considered for differential diagnosis. Any patient with chronic unilateral conjunctivitis or corneal signs should have a lid eversion, and on strong suspicion, a double lid eversion should be done on slit lamp. The option of examination under operating microscope offers many advantages.<sup>7</sup>

Indian Leech (*Haemadipsa Zeylanica*) is an aquatic, soft, muscular, segmented, blood sucking annelid of class Hirudinea. Majority of them live in freshwater habitats but marine and terrestrial forms are also found. When leeches are hungry, they use their anterior suckers to connect to host for feeding. (Figure 4) Once attached, they use suction to stay in the place and inject hirudin into the host blood stream. Leeches explore their environment by head movement and body swaying.

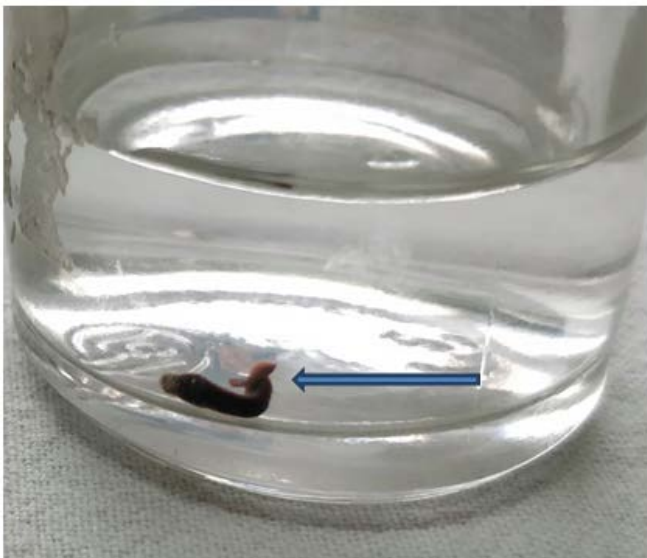


Figure 4: Anterior sucker of the leech

#### **Interaction with humans**

Some people develop allergic or anaphylactic reactions to hirudin secreted by leeches. Red blotches or itchy rash over the affected body parts, swelling around eyes, faintness and difficulty in breathing have been noticed. Bleeding may continue from the wound for some time.<sup>8</sup> This case of an Indian leech lodged in the eyelid emphasizes the need to elicit a complete history from patients who complain of foreign body sensations. Such comprehensive history taking should also be accompanied by a careful ocular examination with double eversion of the eyelid to avoid missing any foreign body lodged in the fornices and subconjunctival

space. Topical anaesthetic and saline is recommended to dislodge the leech from the site of attachment, followed by instillation of antibiotic and lubricating eye drops.

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