

# Ocular Infestation by Leech

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**Abstract Background:** To share our experiences with a patient of leech infestation. **Case description:** A 70 years male presented to outpatient department of ophthalmology, Manipal Teaching Hospital with complaints of foreign body sensation, itching and redness of left eye for the past 7 days. He gives history of washing his face in tap water which comes directly from the stream and he had symptoms after this incident. Clinical diagnosis was leech adherent to the bulbar conjunctiva near the limbus at 1 o'clock position. The leech was extracted and there was no obvious signs and symptoms except for mild subconjunctival hemorrhage. **Conclusion:** Ocular infestation by leech is a rare occurrence. However, this should be considered when patient give history of foreign body sensation, redness and discomfort following swimming or washing face in streams, lakes or ponds.

**Keywords:** leech, stream, conjunctiva

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## 1. Introduction

Leeches belong to the class of Hirudinea, inhabitant of aquatic environment [1]. These can be found in freshwater lakes, rivers or ponds, which size ranges from 5mm to nearly 25 cm [2]. They are blood sucking worms with segmented bodies having a sucker at each end- one small anterior for feeding, the other larger one for hanging when they feed [3,4]. At first, the leech attaches to the host using its suckers. One of these suckers surrounds the leech's mouth, which contain numerous teeth that bite into the host's flesh. It is interesting to know that leeches suck 2-20 ml of blood on an average within 10-30 min, then fall down spontaneously after being completely engorged [2].

Leeches have an opening between the teeth through which it secrete saliva [2]. Saliva contain a variety of biochemical substances which include anticoagulants like hirudin, hyaluronidase, anesthetics, antibacterial, collagenase etc. These substances are responsible for analgesic, anti inflammatory, anti-thrombotic and anesthetic effect [5]. Because of these distinctive properties of leech, it has been used for therapeutic purposes since the ancient time. Leech therapy has been successfully used in human patients to treat thromboembolic diseases, in plastic surgery, and other reconstructive surgeries [6].

## 2. Case Report

A 70 year male presented to outpatient department of Ophthalmology, Manipal Teaching Hospital with complaints of foreign body sensation, itching and redness of 7 days duration in his left eye. He mentioned that he had his symptoms after washing his face in tap water

which had its source directly from a stream. He was completely normal before that incident.

On examination with pen light, there was large dark colored foreign body over the bulbar conjunctiva near the limbus. Slit lamp examination revealed patchy subconjunctival hemorrhage and a dark black colored mass near the limbus at 1 o'clock position. One end was attached to the bulbar conjunctiva near the limbus whereas the other end was moving (Figure 1).

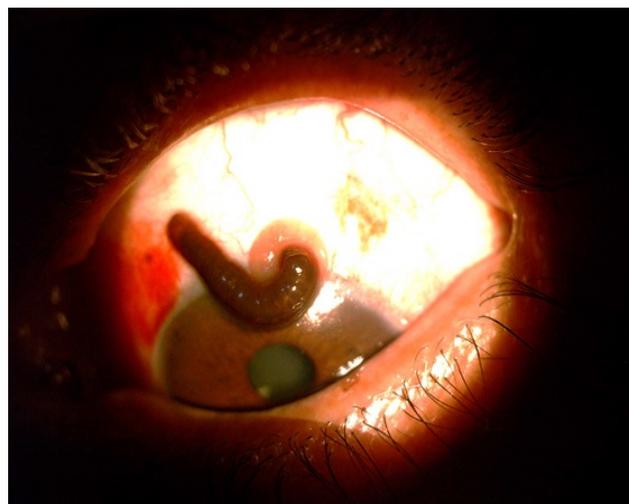


Figure 1. Leech Attached to The Conjunctiva Near The Limbus

A 4% xylocaine drop was instilled followed by 2% pilocarpine drop. After few minutes, the leech became numb and fell down over the left cheek of the patient. It was then grasped with toothed forceps. The eye was examined to look for any evidence of scleral perforation, corneal injury and uveal tissue prolapse. However, the sclera, cornea, anterior chamber depth and pupil were normal except for subconjunctival hemorrhage (Figure 2).



**Figure 2.** Localized Subconjunctival Hemorrhage After Removal of Leech

Posterior chamber was also within normal limits. There was no bleeding from the site of attachment after removal of the parasite. (Figure 3)



**Figure 3.** Live Leech After Extraction

We applied topical antibiotic to the patient. He was discharged on topical antibiotic and anti-histamine along with antibiotic ointment. On the third day after extraction, there was no obvious symptoms except for minimal subconjunctival hemorrhage

### 3. Discussions

Ocular manifestation by leech is a rare entity. It was reported that leech infestation can even affect nasopharynx [7], larynx [8], ear [9] and gastrointestinal tract [10]. Though leeches have a unique properties and have clinical application in various diseases, they should

be taken as an emergency condition when present in vital organs. They may present with itching and profuse bleeding from the attachment site of leech. Besides, it should be kept in the differential diagnosis of ocular foreign body and scleral perforation with iris prolapse [11]. Most of the patients had their contact with leeches either after washing faces or swimming in streams or lakes. So, ocular infestation with leech should be considered in patients with similar history.

### 4. Conclusion

There are many cases of foreign bodies in the eyes, flying insects are very common but with leech in the eye could be one of rare instances. It does happen as it was in this case.

### Declaration of Conflicting Interests

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