

Case Report

Ocular Leech Infestation

Rubi Dey DO¹, Subhajeet Dey MS^{1,2}

Abstract

A 67-year-old myopic man presented to the Ophthalmology Department of a teaching hospital in the mountainous state of Sikkim with complaints of red eye, ocular discomfort, and sensation of something moving in his right eye that lead to occasional visual blurring from the previous four days. His symptoms started after washing his face in a stream. Clinical diagnosis was a leech in the limbus of the right eye at the 12 o'clock position. Ocular leech infestation should be considered in a patient with a history of swimming or face washing in streams and lakes. Herein we report a case of ocular leech infestation that presented as red eye with intermittent blurring of vision in the affected eye, and discuss the differential diagnosis and clinical significance.

Keywords: blurring of vision, leech, red eye

Introduction

Ocular foreign body is a common indication for an emergency ophthalmic consultation; however, the presence of a leech as an ocular foreign body is rare. Reports are scarce in the literature, even though cases have been mainly presented from Japan and fairly commonly seen in Tasmania. Ocular leech infestation should be considered in a patient with a history of swimming or washing their face in streams and lakes. Successful approaches to treatment include complete removal of the foreign body, examination for perforation of the globe and management of the same.

Case report

A 67-year-old man was seen in the Ophthalmology Department of a teaching hospital in the mountainous state of Sikkim with complaints of redness, foreign body sensation, and occasional sense of something moving in his right eye leading to intermittent blurring of vision during the previous four days. History revealed that the onset of his symptoms began after he visited a stream to wash his face. There was no

history of trauma to the eye or any other chronic eye disorders other than myopia causing a need for optical correction with glasses.

Penlight examination revealed congestion, patchy subconjunctival hemorrhage and a dark fleshy mass at the 12 o'clock position near the limbus (Figure 1). Visual acuity was 6/6 for distance and N6 with his existing glasses. Slit lamp examination showed conjunctival congestion with patchy subconjunctival hemorrhage throughout the bulbar conjunctiva but no papillary hypertrophy. A dark black-brown foreign body was seen attached at the 12 o'clock position near the limbus resembling uveal tissue prolapse. A part of the dark foreign body was intermittently moving and covering the pupillary area. The dark moving foreign body was identified as a live leech which was grasping the limbus at the 12 o'clock position.



Figure 1. Dark Fleshy mass at limbus

Authors' affiliation: ¹Department of Ophthalmology, Sikkim Manipal Institute of Medical Sciences, ²Department of Surgery, Sikkim Manipal Institute of Medical Sciences, Sikkim, India.

Corresponding author and reprints: Subhajeet Dey MS, Department of Surgery, Sikkim Manipal Institute of Medical Sciences, 5th Mile, Tadong, Gangtok-737102, Sikkim, India. Tel: +91-9434755078(M), +913592-271060(R)

E-mail: subhajeetd@gmail.com, subhajeetdey@yahoo.co.in

Accepted for publication: 9 December 2009

A 4% xylocaine drop was instilled in the right eye and after few minutes the leech became numb and curled up. With the use of a toothed forceps, the leech was grasped as close to the limbus as possible at its attachment point and gently removed, taking care not to leave behind any part of it (Figure 2). The eye was further examined for evidence of any scleral perforation, corneal injury, uveal tissue prolapsed, or any signs of uveitis (Figure 3). On fluorescein staining, no corneal epithelial defect was detected. Intraocular pressure (IOP), as measured by applanation tonometry, was 18 mmHg right eye (OD) and 17 mmHg left eye (OS). Fundus examination with DO was unremarkable. The patient was put on Ciprofloxacin and Tobramycin eye drops, in addition to Tobramycin eye ointment for a five day period. Follow up at the end of the first week showed regression of most of the subconjunctival hemorrhage and conjunctival congestion. The patient was symptom-free.



Figure 2. Removed leech



Figure 3. Eye after removal of leech

Discussion

Therapeutic use of leeches in medicine is well known, since the last 2500 years.^{1,2} Ocular leech infestations are sporadically reported in the literature.³⁻⁸ All cases had contact with leeches either after washing or dipping their faces in stream water, swimming in streams or trekking in the jungles. Our patient had contacted the leech while washing his face in the stream of the hilly terrain which was the source of water for daily needs.

Scleral perforation with prolapse of uveal tissue is a differential diagnosis that has to be kept in mind.^{6,7} A thorough ocular examination in our case excluded this.

The methods employed for the extraction included: picking up the leech with forceps after instillation of a local anesthetic⁷ or application of the local anesthetic which made the leech fall off.⁴ Other methods reported include instillation of hypertonic saline in the event of failure to extract following instillation of local anesthetic,^{8,9} or direct application of cooking salt followed by washing with copious amounts of normal saline solution.³ It is very important to ensure that the leech's jaws have not become detached from its body before removal and thus remain in the wound leading to a source of infection.³ We ensured a gentle removal so that no part of the leech was left behind. No specific medications are known to facilitate the removal of a leech, but a host of preparations have been tried over the years which include: eucalyptus oil,¹⁰ lemon juice, heat from cigarettes, the flame of a lighter, moist tobacco, and tiger balm.³ Most of these methods have been employed in settings other than hospitals, where the application of local anesthetic drops followed by forceps extraction is the standard practice as employed in our case.

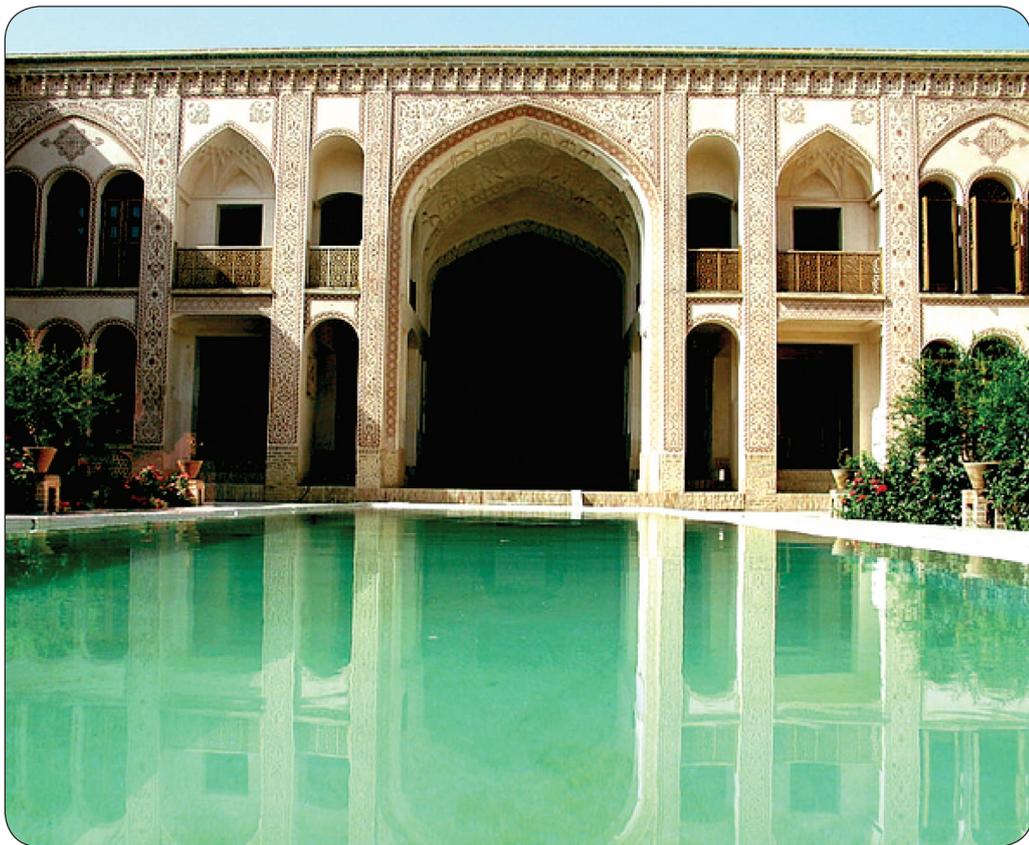
Subconjunctival hemorrhage is usually seen after leech bite because of the production of a non-enzymatic secretion termed hirudin, which prevents blood from clotting. This does not require specific measures as it disappears with time.³ Usually antibiotic formulations are prescribed post-intervention^{3,9} for five days, as in our case. Most patients are reported to be symptom-free by the third day of extraction without any epithelial defects.^{5,9}

Ocular leech infestation should be considered in patients with a history of swimming and washing their face, etc. in streams and lakes. Attention should also be given to ocular leech infestation in the differential

diagnosis of ocular trauma with iris prolapse.

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An old House in Kashan- Iran. Kashan is a beautiful ancient city around 270 km far from Tehran