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Case Report

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Red Eye in Rural Environment: An Unusual Reason**Cagri ILHAN^{1*} and Mehmet CITIRIK²**¹Department of Ophthalmology, Hatay State Hospital, Hatay, Turkey²Associate Professor, Department of Ophthalmology, University of Health Sciences, Ankara Ulucanlar Eye Education and Research Hospital, Ankara, Turkey***Corresponding Author:** Cagri ILHAN, MD, Department of Ophthalmology, Hatay State Hospital, Tayfur Sokmen Cad. No:36, 31080, Antakya/Hatay, Turkey, Tel: 0090-326-3170353; Fax: 0090-326-3170354; Email: cagriilhan@yahoo.com**Received Date:** Mar 04, 2019 / **Accepted Date:** Mar 19, 2019 / **Published Date:** Mar 21, 2019**Summary**

Eye is a rare target organ of parasitic infestation due to winged fly larvae. The eye can be affected in three different form in ophthalmomyiasis: Orbital, internal, and external. External ophthalmomyiasis commonly seen in the rural environment and close contact with animals especially in spring and summer months. External ophthalmomyiasis can be diagnosed by biomicroscopy with presence of moving larvae and the diagnosis can be confirmed by light microscopy. The basis of treatment is the mechanical removal of the larvae. Topical antibiotic, steroid, and antihistaminic treatment protects from secondary infections and complications. External ophthalmomyiasis is a rare cause of red eye that should be taken into consideration especially in the presence of risk factors that may be associated with the history.

Keywords: Myiasis; Ophthalmomyiasis; Red eye**Cite this article as:** Cagri ILHAN, Mehmet CITIRIK. 2019. Red Eye in Rural Environment: An Unusual Reason. Int Res J Optha. 1: 15-17.**Copyright:** This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. Copyright © 2019; Cagri ILHAN**Introduction**

Red eye is an important ophthalmological emergency and ocular trauma, conjunctivitis, keratitis, iridocyclitis, and glaucoma are the most common causes of red eye [1]. An unusual reason of the red eye is ophthalmomyiasis. Actually, myiasis refers to parasitic infestation due to winged fly larvae [2]. In a case of myiasis, although the most common affected organ is skin, it can be seen in urogenital tract, nose, ear, and the eye [3]. The eye can be affected in three different form in

ophthalmomyiasis. Orbital ophthalmomyiasis is the most serious form of ophthalmomyiasis. The larvae penetrate the globe in internal ophthalmomyiasis and they can be seen in the vitreous cavity. The third of them, external ophthalmomyiasis affects ocular surface and eyelids. External ophthalmomyiasis is spread by direct contact with the larvae containing secretion of the flying female bird. Mechanical removal of the larvae, use of topical antibiotic and steroid drops rapidly heal cases with external ophthalmomyiasis [4]. An external ophthalmomyiasis which is an unusual reason

of the red eye, and its management were presented in this case report.

Case Report

A 10-year-old boy presented to clinic with complaints of unilateral redness, watering, swelling, and foreign body sensation. According to the story taken from his family, the child had come from a village a few hours ago and played in a wasteland contaminated with animal feces. The family did not give any history of trauma, systemic disease, or drug use. The patient's best corrected visual acuity was 20/20 in both eyes. In biomicroscopy examination, there was no any feature in the right eye. In the left eye, chemosis and conjunctival redness were the most remarkable clinical features. When lower eye lid retraction performed for the left eye, many white colored moving larvae about 1-2 mm were seen in the conjunctival fornix. Then the patient was diagnosed as external ophthalmomyiasis after a history of contamination with animal feces in the countryside and clinical examination. After topical anesthesia with proparacaine (Alcaine, Alcon Laboratories, Fort Worth, TX), the larvae were removed mechanically with the help of a cotton-tipped applicator. Topical moxifloxacin (Vigamox, Alcon Laboratories, Fort Worth, TX), olapatadine (Patanol, Alcon Laboratories, Fort Worth, TX), and fluorometholone (Flarex, Alcon Laboratories, Fort Worth, TX) were prescribed. One-day later, all complaints of the patient and clinical findings were completely regressed and continuing of the medication for one-week was ordered.

Discussion

The most common cause of external ophthalmomyiasis is *Oestrus Ovis* that is a parasite passes its life cycle in the nasal cavity of sheep. The human is the intermediate host in this cycle [5]. The disease can be found throughout the world and its frequency increases in spring and summer. Poor living conditions in rural environment and close

contact with animals are the most important risk factors to face with the disease [6]. In this case, there is a story of close contact with field contaminated with animal feces and larvae. He presented to clinic with complaints of unilateral redness, watering, swelling, and foreign body sensation. This is a relatively milder clinic because it is known that external ophthalmomyiasis can be presented with preseptal cellulitis or keratouveitis [7].

In this case report, white colored moving larvae seen in conjunctival fornix. In this regard, a careful examination including tarsal conjunctiva eversion is important for patients presented with red eye. In addition to the clinical diagnosis, external ophthalmomyiasis diagnosis can be corrected by light microscopy with the help of placing a sample between lam and coverslip after wetting it with saline solution. The presence of white, immobile, transparent, segmented larvae with two hook shaped protrusions at the anterior, confirms the diagnosis [8].

In a case of external ophthalmomyiasis, the basis of treatment is the mechanical removal of the larvae. Topical anesthetic drops are often used to facilitate the procedure. In this case report, a cotton-tipped applicator was used for mechanical removal of the larvae and successfully completed. To use antibiotics and steroid-containing drops is suggested to relieve symptoms and prevent secondary infection [2]. In the follow-up period, caution should be exercised in terms of recurrence and treatment-related complications. In this case, the symptoms totally regressed for one-day and antibiotic, steroid and antihistaminic medication were ordered for one-week.

In conclusion, external ophthalmomyiasis is an unusual reason of red eye especially in a rural environment. Moving larvae can be seen in the conjunctival fornix and they are removed under topical anesthesia. Topical medication regresses symptoms and prevents from further infections.

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