Case Report

External ophthalmomyiasis A case report

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Abstract

Ophthalmomyiasis is an infestation of the eye with larvae of most common sheep nasal botfly (Oestrus ovis). We describe a case of ophthalmomyiasis in a 50-year-old man who presented with ocular foreign body sensation, redness and tearing. The causative larvae were removed in the emergency room and sent to laboratory for identification. The patient symptoms improved after topical treatment with antibiotics–steroid combination therapy.

Keywords: Conjunctivitis, Ophthalmomyiasis, Oestrus ovis

Introduction

Myiasis is the infestation of humans and animals with maggots (larvae) of certain flies. Skin is the most common organ of infestation, but maggots have been removed from eyes, ears, nose intestine and urogenital tract.

Ophthalmomyiasis is of three (3) types; external where larvae deposited on the eyelid or ocular surface, internal type where larvae penetrate the globe and can be seen in the vitreous cavity or subretinal space. The most damaging species is orbital myiasis where the larvae got their way to the orbital structure and caused serious damage. In the external type, the larvae are ejected by the family fly in the milky fluid while she is in flight. The treatment consists of a mechanical removal of the larvae after an application of topical anaesthetic agents and use of topical antibiotic–steroid combination. The symptoms resolve immediately after the removal of larvae.

Case report

A 50-year-old patient presented to the emergency room complaining of severe tearing, redness and a moving foreign object in his right eye occurred immediately after he passed through sheep raising areas. The patient does not have any significant history of any systemic illnesses. He is not using any topical or systemic medication.

On examination, his visual acuities were 20/20 in both eyes. The right eye showed conjunctival chemosis, and by pulling down the inferior eyelid, three (3) motile white colour small worms were noticed. There was no clinical photograph available at that time. They disappeared quickly on shining the light of the slit lamp. Benoxinate eye drops were applied to that eye, and with the help of the forceps, three (3) tiny worms were removed and put in a saline solution and sent to the laboratory (Fig. 1). The cornea was clear, and the rest of the anterior segment examination was normal. Fundus study did not reveal any maggots in the vitreous or subretinal spaces. Left eye examination was normal.

The diagnosis of external ophthalmomyiasis was made and the patient was started on Ofloxacin eye drops 4 times a day and Fluorometholone drops 4 times a day. The patient was seen 3 days post treatment and was found to be perfectly normal. The laboratory findings showed larva (Oestrus ovis) type (Fig. 1).
Discussion

Ophthalmomyiasis is an infestation of the eye with larvae of most commonly sheep nasal botfly (O. ovis) and these larvae (maggots) are ejected in a milky fluid by the female fly while it is in a flight (1–3). This is common in rural areas and sheep raising areas. Our patient was within an area of shepherd farms when he first started to show symptoms. The maggots are tiny translucent worms, 1–2 mm in length with dark heads and a couple of distinct dark brown oral hooks and numerous hooks of the body can be seen crawling over the conjunctiva or swimming in the vitreous cavity and/or subretinal space. The 3 larvae were sent to the laboratory but only 2 of them were mounted and photographed. The most common type is O. ovis fly that produces the first order larvae causing ophthalmomyiasis.4

There are three (3) types of ophthalmomyiasis:
External type where the infestation is on the external of the ocular surface. Here the patient presented with conjunctivitis, preseptal cellulitis and/or keratouveitis.
Internal type where the larvae penetrate into the glove and the larvae can be seen within the vitreous cavity and/or subretinal space. This is the destructive type.
The 3rd type, which is more destructive, is the orbital myiasis where the larvae penetrate deep into the orbital cavity and destruct the tissue.5

Our case is exclusively of the external type where the larvae were seen on the conjunctival surface with normal posterior segment.

Ophthalmomyiasis is even rare, the largest series reported was from Libya where M. Abdellatif et al. reported 21 cases in their series.6

O. ovis is the most common cause of human ophthalmomyiasis and common in shepherds and farmer areas in many countries around the world and can occur as out-breaks.7 Our patient was related to a shepherd area and our country is part of the countries common to have ophthalmomyiasis by O. ovis.3,5

In the external type, the patients may present with classic conjunctivitis, pseudomembranous conjunctivitis, punctuate keratitis and/or keratouveitis.8,9 We reported a case of an external ophthalmomyiasis presented with a picture of simple conjunctivitis with normal findings of the rest of anterior segments and posterior segments excluding the other 2 destructive types of ophthalmomyiasis (internal or orbital). Even rare, ophthalmomyiasis should be in the different diagnosis of unilateral conjunctivitis in the areas of shepherds and farms. The treatment is effective, and the condition is curable, but a delay in removing the causative larvae may lead to their penetration into the inside of the eye or orbit causing a more destructive damage.9 Our patient was relatively young and does not have any systemic diseases making him more vulnerable to the risk of penetration of larvae further to the inside of the eye or to the orbital cavity. The patient improved dramatically after a mechanical removal of the larvae and a topical application of antibiotics –steroid combination therapy.

Conflict of interest

The authors declared that there is no conflict of interest.

References


