Dirofilaria repens is a rare cause of red eye: A case report

Erkan Bulut, Adem Güll, Mehmet Dokur, Fadime Eroglu

1Beylikduzu State Hospital, Department of Ophthalmology, Istanbul, Turkey
2Liv Hospital, Department of Ophthalmology, Samsun, Turkey
3Biruni University Faculty of Medicine, Department of Emergency Medicine, Istanbul, Turkey
4Aksaray University Medical Faculty, Department of Parasitology, Aksaray, Turkey

Abstract

Dirofilaria is usually stable in cats and circulates as microfilaria. A human being is the final host (dead-end host), which often leads to human dirofilariasis. We present a case of Dirofilaria repens infection located in the bulbar subconjunctival space of a 53-year-old male who presented to the emergency department with red-eye. Slit-lamp examination revealed a white-colored motile worm in the subconjunctival space of the left eye along with redness, mild chemosis, and conjunctival elevation. The parasite was surgically removed and remained undamaged. There was no symptomatic recurrence following parasite removal. The present case report also emphasizes the typical clinical features of Diroflaria repens. Dirofilaria repens should be considered in the differential diagnosis of a persistent red-eye disease, especially if it is associated with the presence of a mobile foreign body.

Keywords: Dirofilaria repens, diagnosis, red eye, surgical removal

Introduction

Dirofilariasis is a zoonotic illness, rarely seen in humans. Dirofilaria species should be considered in the differential diagnosis when an ophthalmic examination reveals a moving foreign body in the subconjunctival space in a patient with a complaint of red-eye. Dirofilaria repens is a more vigorous parasite than other Dirofilaria species. According to the current literature, the most appropriate treatment is surgical removal of inactive or non-reproducing Dirofilaria repens from the subconjunctival space, where it causes specific symptoms. The purpose of this case report was to discuss the typical ocular symptoms and therapeutic features of an adult patient admitted to the emergency room with Dirofilaria repens.

Case presentation

A 53-year-old male traveling in South Asia had redness in his left eye as a result of a fly hitting his eye while he was sleeping. After returning to Turkey, the patient complained of mild redness and discomfort along with itching and a foreign body sensation in his left eye for three weeks. He was presented to the emergency department, where he underwent a detailed ophthalmic examination. His best corrected visual acuity was 20/20 in both eyes. A slit-lamp examination revealed a white-colored motile worm in the subconjunctival space of the left eye along with redness, mild chemosis, and conjunctival elevation. The parasite was surgically removed and remained undamaged. There was no symptomatic recurrence following parasite removal. The present case report also emphasizes the typical clinical features of Dirofilaria repens. Dirofilaria repens should be considered in the differential diagnosis of a persistent red-eye disease, especially if it is associated with the presence of a mobile foreign body.

*Corresponding Author: Erkan Bulut, Beylikduzu State Hospital, Department of Ophthalmology, Istanbul, Turkey
E-mail: erkanbulut@outlook.com
Polymerase chain reaction (PCR), polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP), and real-time PCR methods are used to successfully differentiate species [9,10].

Macroscopic identification was acceptable in this case report because Dirofilaria repens is a well-known species in ophthalmic surgical practices. As in our case, current literature only suggests that the primary method of treatment is the surgical removal of inactive or non-reproducible Dirofilaria repens from the subconjunctival space [2,6,12,8,12].

The patient’s history of Dirofilaria repens parasitosis, emerging clinical results, current effective treatments, and location of the parasite within the body were all consistent with evidence-based medicine.

Conclusion

Although less common in the emergency department, awareness of the typical clinical features of Dirofilaria repens is crucial for accurate diagnosis and appropriate treatment, especially in endemic areas. Dirofilaria repens should be considered in the differential diagnosis of a persistent red-eye disease, especially if it is associated with the presence of a mobile foreign body.

Conflict of interests

The authors declare that they have no competing interests.

Financial Disclosure

All authors declare no financial support.

Patient Informed Consent

The patient was admitted for the patient's care, and he had consented to an investigation. However, he was urgently referred to another institution for life-saving surgical intervention. The authors have tried to obtain consent to publish. The patient’s anonymity was preserved, and this article does not contain any personal or demographic details that can be linked to the patient’s identification.

References