

Ocular Dirofilariasis - A Diagnostic Dilemma

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Abstract

Dirofilariasis is a zoonotic filariasis primarily affecting canines. It may infect humans causing pulmonary infarcts, subcutaneous and subconjunctival nodules. Dirofilaria repens is the main species implicated in subconjunctival lesions. Proper diagnosis and treatment can cure the patient of all his symptoms. Hence it is important to have a high index of suspicion about this emerging zoonosis. This is a case report of ocular Dirofilariasis from a tertiary care hospital in Thrissur, Kerala.

Keywords: Dirofilariasis, Subconjunctival, Nematode, Excision

Introduction

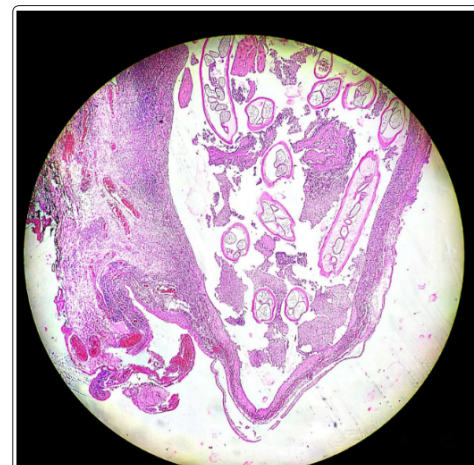
Dirofilariasis is a zoonotic filariasis primarily affecting dogs. It may infect humans causing pulmonary infarcts, subcutaneous and subconjunctival nodules. Mosquitoes belonging to *Aedes*, *Culex*, *Anopheles* and *Mansonia* species are believed to be the vectors [1]. Ocular involvement is usually in the eyelids, periorbital, intraocular or subconjunctival tissues [1,2]. This is a case of subconjunctival Dirofilariasis reported from a tertiary care hospital in Thrissur, Kerala.

Case Report

A 56 year old diabetic female presented with history of pain and redness of the left eye of 1½ month duration. Examination revealed conjunctival congestion along with a 5x7mm mobile, firm, subconjunctival mass with an area of conjunctival ulceration and dilated episcleral vessels resembling feeder vessels (Figure 1). Rest of the ocular examination was normal and there was no lymphadenopathy. A clinical diagnosis of Ocular Surface Squamous Neoplasia was considered. Wide excision biopsy of the lesion followed by amniotic membrane graft was done. Histopathology revealed a conjunctival swelling of 4x6mm with ulceration which showed intense inflammatory infiltrate surrounding cross-sections of a nematode parasite with thick cuticle, fine external longitudinal ridges and circumferential muscle layer. It also showed a single intestine and two reproductive tubes (Figure 2 and 3). These features pointed towards an adult female *Dirofilaria repens* infection. Thus the patient was diagnosed to have subconjunctival Dirofilariasis. The patient was relieved of all symptoms post operatively.



Figure 1: Limbal mass with surface ulceration and feeding vessel



Figures 2: Histopathology

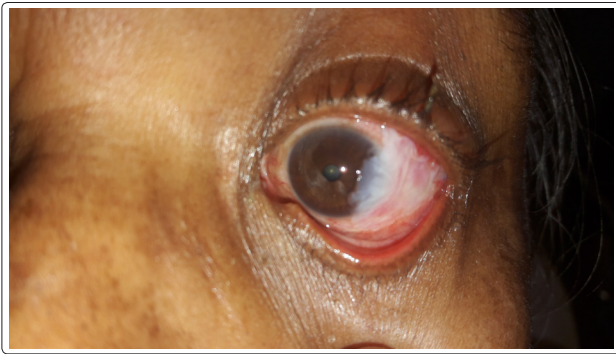


Figure 3: Immediate post-operative picture with amniotic membrane transplantation

Discussion

Dirofilaria repens is the main species implicated in subconjunctival lesions [3]. Many of these are misdiagnosed as nodular scleritis, conjunctival cyst or malignancy. As laboratory investigations are usually inconclusive, an excision biopsy is often required to clinch upon the diagnosis [4]. Surgical excision not only establishes the diagnosis but also gives definitive cure. To confirm the diagnosis DNA extraction followed by parafilarial PCR should be performed. As microfilaremia is extremely rare, systemic chemotherapy is usually not indicated, though few reports have advised ivermectin/albendazole post excision along with a short course of steroids [5].

Conclusion

Dirofilariasis is an emerging zoonosis in India which is unfortunately inadequately addressed. This is mainly because it is often undiagnosed or misinterpreted. It can be picked up only if both the ophthalmologist and the pathologist have a high index of suspicion. Timely diagnosis and treatment through a simple excision can relieve the patient of all his symptoms.

References

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