Case Report

A CASE STUDY OF THELAZIASIS IN GOAT

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ABSTRACT

Thelaziasis is the infestation of eye with parasitic nematodes belongs order spirurida and family Thelazidae. Thelazia spp. inhabit the eyes and associated tissues such as eyelids, lacrimal ducts of various mammals, birds and human etc. Thelaziasis is observed in Mahaboobnagar goat, which was presented to Veterinary clinical complex, Tirupati with actively moving worms observed in the conjunctiva of left eye with lacrimation and photophobia. It was treated successfully with levamisole orally @ 5 mg/kg body wt and Ivermectin injection @ of 0.2 mg/kg body wt subcutaneously and applied antimicrobial steroid ointment in to the eye for the prevention of inflammation and secondary bacterial infection.

Keywords: Eye worm, Goat, Parasitic nematode, Thelaziasis

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INTRODUCTION

Nematodes belongs to the genus Thelazia and contain several parasites commonly referred to as eyeworms. Thelaziasis is an important eye worm disease of livestock which is characterized by severe lacrimation, conjunctivitis, keratitis, opacity of cornea, photophobia and blindness in the eyes of the affected animals. *Thelazia* species inhabit the eyes and associated tissues such as eyelids, lacrimal ducts of various mammals, birds and human etc., (Otranto and Dutto, 2005). Nematodes transmitted by arthropods may cause severe diseases, especially in developing countries (Otranto and Dutto, 2008). One Mahaboobnagar goat was presented to Veterinary clinical complex,

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Tirupati showing lacrimation, ocular discharge and corneal opacity with actively moving whitish worms observed in the conjunctiva. A clinically feasible technique for reliable detection of adult eye worms was lacking so, gross inspection of the eyes revealed the worms (Fig. 1) and also was collected lacrimal fluid for the embryonated eggs or larvae. The incidence and therapeutic control of thelaziasis in dogs is frequently reported in India and abroad (Koyama *et al*., 2000; Lia *et al*., 2004) but, very little information is available regarding therapeutic management of thelaziasis in goats. Hence, the present report highlights successful therapeutic management of theilaziasis in goats.

Life cycle of Thelaiza species is as follows. These whitish nematodes are transmitted by non biting Dipteran flies while feeding on lacrimal secretions of infected animals. Female worms are ovo-viviparous and discharge larvae in to the ocular secretions. The larvae are ingested by the fly and become infective in two to four weeks. The infective third stage larvae emerge from labella of infected flies and are mechanically deposited in the eye of the host during feeding. In the definitive host thelazia found in various tissues of the eye, including the eye lids, tear glands, nictitating membrane or in the eye ball itself (Shen *et al*., 2006). A clinically feasible technique for reliable detection of adult worms is lacking. So, gross inspection of the eyes revealed the worms which is generally recommended for *Thelazia rhodesii* eye worm which commonly found in the conjunctival sac.

Treatment and control measures

Topical application of anaesthetics is useful for tissue manipulation and for easy identification and recovery of the eye worms. Some worms were removed mechanically after instillation of local anaesthetics and irrigated infected eye with 50-75 ml of aqueous solution of 0.5% Iodine and 0.75% Potassium Iodide and finally administered levamisole @ of 5 mg/kg body wt orally and Ivermectin @ 0.2 mg/kg body wt have shown activity against Thelazia species (Radostits *et al.,* 1994). Concurrent use of an ophthalmic solution containing Ciprofloxacin plus Dexamethasone applied locally, twice for 5 days shown rapid recovery from lacrimation and corneal opacity. Within seven days of post treatment lacrimation and corneal opacity and worms completely disappeared and goat become clinically normal which is coinciding with the findings of Kumar and Madhurendra *et al.* (2016). Control measures are directed especially against face fly like keeping flames of neem leaves in the sheds and keeping of sheep and goats on dry, open pastures will have lesser face flies threat when compared to intensive feeding of sheep and goats where shade, darkness and moisture are present (Soulsby, 1982).

Conclusion

The present study showed that levamisole and ivermectin were effective in the treatment of Thelaziasis. The infested goat have to be segregated from others until the condition is completely treated.

Fig. 1. Actively moving Thelaiza worm in the eye

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