CASE STUDY: OCULAR THELAZIOSIS IN A TRAVELLED DOG

Theo de Waal PhD MRCVS, associate professor, School of Veterinary Medicine, UCD; Amanda Lawlor BAgrSc, senior technical officer, School of Veterinary Medicine, UCD; and Susan Roulston MVB MRCVS, present a case study on the discovery of eyeworm in a three-year-old dog, and subsequent treatment of thelaziosis

Thelaziosis is an infection of the eye caused by the nematode *Thelazia callipaeda* in a wide range of host species, including humans. Autochthonous transmission has been reported in an increasing number of European countries but, to our knowledge, it has not been reported in Ireland.¹

CASE REPORT

A three-year-old male Labrador X Poodle had travelled to southern Spain for a month in October 2018. The dog wore a deltamethrin collar during the stay in Spain and received routine anthelmintic treatment before re-entry into Ireland. In April 2019, the dog started to show signs of itchy eyes and was presented to a private veterinarian on May 14, 2019. On ophthalmic examination, a thread-like worm was seen wriggling across the cornea of the left eye. The dog was sedated on the same day and on examination, the conjunctiva of the left eye was inflamed, especially the nictitating membrane. There were multiple small nodules on the conjunctiva. On flushing with sterile water, a worm emerged from under the upper lid (Figure 1) and was retrieved with fine forceps. The right eye showed similar inflammation of conjunctiva with multiple nodules and another worm identified on flushing.



Figure 1: Conjunctivitis and *Thelazia callipaeda* nematode in the eye of a three-year-old Labrador cross that had travelled to Spain. Photo: Susan Roulston.

The dog was treated with eye drops – one drop, twice daily for five to seven days and 10% imidacloprid and 2.5% moxidectin spot-on was applied. Three days later, the owner reported that the eyes seemed normal with no more itchiness observed. One of the worms was submitted to the UCD veterinary parasitology laboratory for identification. It was identified as a female *T* callipaeda nematode (Figure 2), approximately 12mm in length, using the morphological criteria as described by Otranto *et al.*²



Figure 2: Thelazia callipaeda female nematode showing buccal capsule and characteristic transverse cuticular striations. Photo: Theo de Waal.

DISCUSSION

T. callipaeda is also known as the oriental eyeworm, and has increasingly been being reported in recent years from many European countries including Spain.³ It is a vector-borne, zoonotic helminth transmitted by male drosphilid fruit flies, *Phortica variegata*, in Europe.⁴



Both moxidectin and milbemycin oxime is effective against *T. callipaeda* but slow-release insecticide collars do not seem to protect animals against thelaziosis.⁵ Monthly treatments with moxidectin spot-on or milbemycin oxime per os, when animals are travelling to endemic areas, is advised to reduce the infection risk.^{5,6}

Under the pet travel scheme pet owners are required to fulfil specific health requirements when travelling with their dogs in Europe (https://www.agriculture.gov.ie/pets/); however, the required tapeworm treatment will have no effect on this parasite and, therefore, pet owners need to be aware of the potential danger of importing parasites into non-endemic areas. The vector fly, *P. variegate*, has not been recorded in Ireland and recent ecological niche models have shown that although large areas of mainland Europe are suitable for the development of *P. variegate*, its habitat in the United Kingdom and Ireland would be limited to the southern and eastern parts of England.¹⁷

This case highlights how easy it is to introduce foreign diseases into Ireland from mainland Europe and that veterinarians should always be vigilant when examining pets who have travelled.

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