

Getting lungworm aware



This month, **Ray O'Mahony** MVB MRCVS MAVH looks at the rise of lungworm cases in dogs, the signs of the disease and what steps owners can take to prevent its spread

There has been a surge of interest in lungworm infestations over the last couple of years, thanks in no small part to Bayer's national awareness campaign, "Be Lungworm Aware" (www.lungworm.co.uk). This focuses on one particular species of parasite, *Angiostrongylus vasorum*, and was probably prompted by recent evidence that the geographical range of the parasite is extending dramatically northward. Its range was, until recently, restricted to southern England and Wales. A large study of 546 foxes, its natural host, as recently as 2008 revealed no infestation north of the Midlands. However in 2009, a dog in Scotland was diagnosed with the parasite. This dog had never travelled outside of central Scotland so the spread of the parasite outside its previous endemic areas was confirmed for the first time. Increases in the average summer time temperature are thought to be the main factor for the spread.

A. vasorum is a nematode that causes disease in dogs and other members of the canidae family. It has an indirect lifecycle, which means it requires an intermediate host to reach its infectious stage. Slugs and snails are the most common intermediate hosts but frogs can also act as a source of infection. When a dog eats an intermediate host the parasite is released into the digestive tract of the dog and migrates through the wall of the bowel into the blood and lymphatic systems and makes its way to the heart and pulmonary artery. Here, they mature

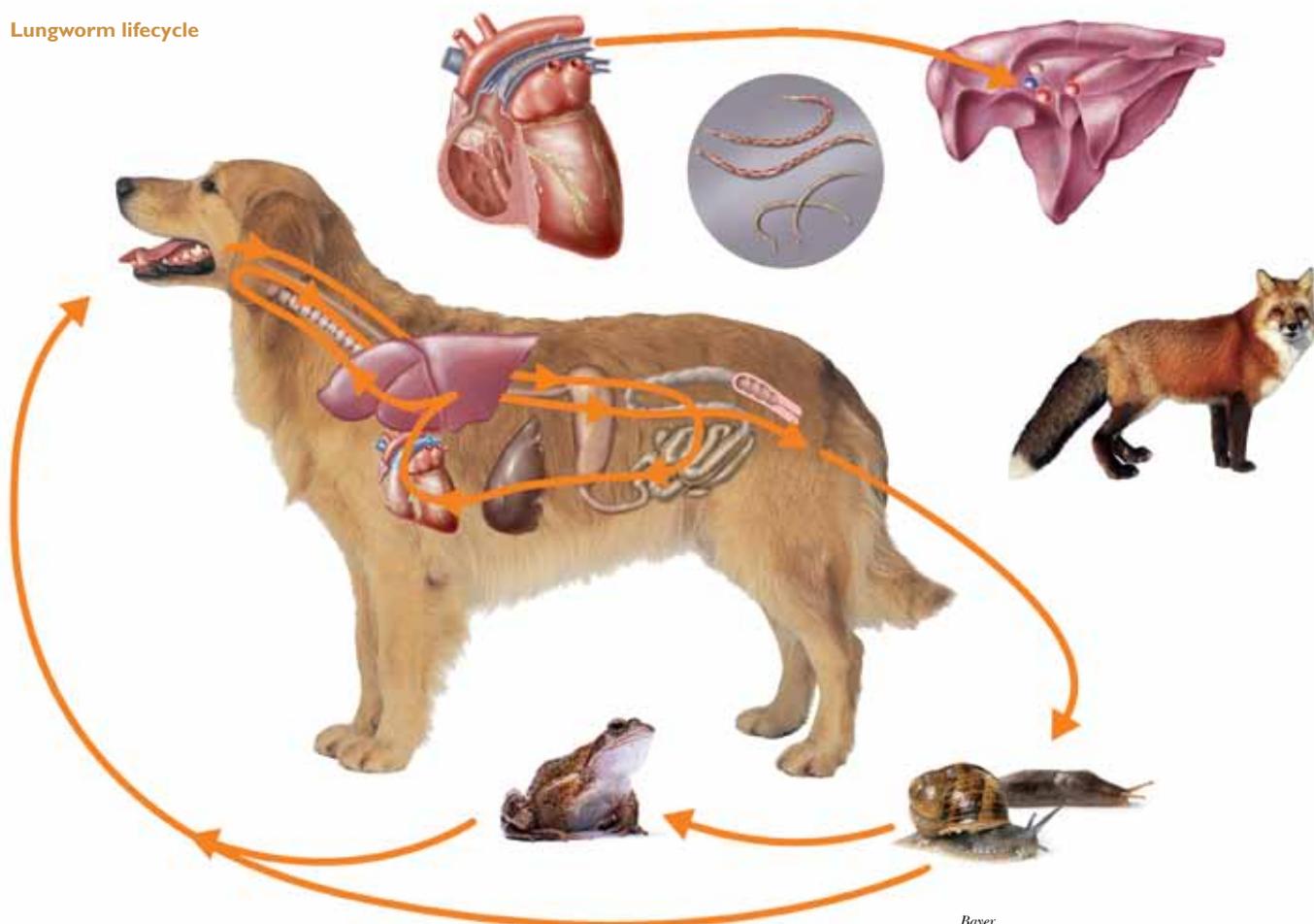


into adults and begin to lay eggs. These eggs are carried into the lung tissues via the bloodstream and lodge here, resulting in small inflammatory nodules filled with eggs and larvae. On hatching, the larvae tunnel out of these nodules into the airways where they are coughed up and swallowed. They are eventually passed in the dogs faeces. These are then ingested by slugs and snails and undergo two developmental stages in the snail before becoming infectious to dogs once again.

The clinical signs associated with *A. vasorum* infection are usually respiratory in nature. Almost 80 per cent of cases in a recent study presented with a cough, which is usually harsh and dry. Difficult, laboured or rapid breathing is also commonly seen. Other symptoms can include lethargy, exercise intolerance, clotting disorders and right-sided heart failure. If undiagnosed, the condition can be fatal. Although any dog can become infected, clinical signs tend to be more severe in dogs under two years of age. Infections tend to be chronic in nature with the clinical signs lasting many months if untreated.

Diagnosis is possible by faecal analysis by a veterinary laboratory. Treatment is usually straightforward and rewarding. Advocate spot-on is available on prescription from a veterinary surgeon only and is the treatment of choice. A standard worming regime every three or four months will not be sufficient. Using a veterinary spot-on treatment such as Advocate on a monthly

Lungworm lifecycle





basis during the warmer months of the year will help. Dog owners should always clean up after their animals, as it reduces the load of infective larvae, of this, and all the other worms that infect dogs, in the environment. *A. vasorum* cannot be transmitted to people but many of the other worms such as *Toxocara* can and can cause serious disease, especially to children. These other worms can be controlled by regular over-the-counter products.

Owners should be extra vigilant as dogs can inadvertently pick up slugs and snails by drinking from puddles or chewing a bone or toy left in the garden. The worm cannot be transmitted directly from dog to dog but animals sharing the same environment as infected dogs are likely to pick up the parasite from infected slugs and snails. Trying to reduce the number of slugs and snails in the garden is not really feasible and slug bait is very poisonous to dogs so such control methods are not advisable.

Cats cannot become infected, although they do have their own lungworm called *Aelurostrongylus abstrusus* with a similar lifecycle. The distribution of this parasite is not well-known and the clinical signs it causes are usually very mild. Infections tend to be self-limiting, but occasionally heavy burdens can result in clinical disease with respiratory signs similar to those described for dogs.

There are other lungworms in the UK such as *Crenosoma vulpis*, *Oslerus osleri* and *Filaroides hirthi* that cause respiratory disease in dogs. The clinical incidence of *C. vulpis* and *O. osleri* appears to be increasing and this is blamed on the increasing urban fox populations with foxes being the natural hosts of all of these parasites. As with *A. vasorum*, regular worming is not an effective control so any dog with a chronic cough or respiratory distress should be examined by a vet for a definitive diagnosis and appropriate treatment.

Due to the increasing prevalence of this parasite and its resistance to most worming regimes it is important that dog owners are made aware of the clinical signs and urged to clean up after their pets to prevent the spread of the disease.



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