

ECHINOCOCCOSIS (HYDATID DISEASE)

Introduction

What is Echinococcosis?

Echinococcosis, is also known as hydatid disease or hydatidosis. It is caused by the intermediate life stage of a tapeworm that affects dogs called *Echinococcus granulosus*. There are two strains of the parasite, which are *E. granulosus granulosus* (sheep) and *E. granulosus equinus* (horse) currently found in dogs in Great Britain.

The life-cycle involves an intermediate host (usually sheep and horses but sometimes humans) and a final host (dog or fox). It is miniscule in length (up to 9 mm) but up to several thousand tapeworms can become firmly attached to the small intestine of each dog or fox. The tapeworm sheds eggs in the dog or fox's droppings and so contaminating the environment. Eggs are quite resistant, although can be destroyed. They can be destroyed through drying out of the eggs if they are exposed to heat but the eggs can survive under certain conditions for up to one year.

Infection and Source of Infection in Animals

Sheep are the most common intermediate hosts when they eat eggs from grass contaminated with dog droppings. These eggs then 'hatch' into larvae and these larvae pass from the intestines to various tissues such as the liver, lungs and occasionally other organs. In these tissues, large cysts (about 10cm or more in diameter) develop that can contain many hundreds of infective larvae. Dogs and foxes get infected by eating contaminated carcasses, such as unnoticed dead sheep on the hillside. Dogs that are fed a diet of commercially prepared pet food will not catch Echinococcosis from this as pet food is prepared with meat fit for human consumption. In addition, if you thoroughly heat any foodstuffs that you would like to prepare yourself, this will kill the infective larvae.

Diagnosis in animals

Animals usually show no signs of the disease, apart from perhaps diarrhoea. Thorough microscopic examination of the dog's droppings will detect eggs and rarely tapeworm segments

Prevention in Animals

Prevention can be readily be achieved by:

- Regular = worming of dogs with an appropriate wormer that your vet can prescribe or recommend
- Cleaning up after un-wormed dogs if they go to the toilet on farmland, especially near food crops or where there are livestock
- Removal and correct destruction of all dead/fallen stock, immediately
- Prevention of dogs and foxes scavenging sheep carcasses
- Knowing about your responsibility in the countryside
- Don't feed unsuitable raw animal offal to dogs, such as 'road kill'.

Treatment and Prevention in Humans

Humans can become infected through poor personal hygiene, such as accidentally eating dog faeces or foods contaminated with dog or fox faeces, particularly vegetables. In humans, clinical signs depend on the location of the cysts. Hydatid disease carries a very poor outlook as the cysts are usually located in vital organs, usually the liver and lungs. At least 30 - 40 human cases of hydatid disease occur in Britain annually.

In humans, the use of blood tests, ultra-sound, x-rays, MRI and exploratory surgery are used in the diagnosis of the disease in people, but the disease can be difficult to diagnose due to the long time between infection and showing symptoms. Surgery is the most common form of treatment, although this is not usually 100% effective and the patient may need medication afterwards to try and prevent the disease recurring. .

Prevention can be achieved by:

- Ensuring hands are washed after handling animals and raw food
- Good food hygiene and kitchen practice, such as washing salad vegetables before eating them
- Regular worming of dogs – your vet will be able to recommend or prescribe the right one to use and how often to give it
- Cleaning up after dogs have gone to the toilet. This is especially so on farmland, near food crops or where there is livestock.

Legal requirements include the sterilisation of all offal, compulsory burial and effective disposal of dead sheep and exclusion of dogs from slaughterhouses.

Pets are Good for People

Pets provide us with loyalty, companionship, love and affection, as well as the many physical and psychological benefits. The least we can do to repay this is to ensure that we keep them in the best of health. A healthy pet is a happy pet and a happy pet can help us enjoy a much fuller and more rewarding life.

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For further information, please contact the Pet Health Council on:

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