

FACT SHEET HYDATIDOSIS (FOX TAPEWORM)

The following information will help you to become familiar with the epidemiology, symptomatology, ecology and control of Fox Tapeworm.



Actual Adult Size

WHAT IS HYDATIDOSIS?

Hydatidosis (also known as Echinococcosis) is a parasitic infection transmitted through ingestion of eggs passed in the feces of Canines and Felids that have fed upon infected rodents. The disease, found throughout the Northern Hemisphere, is recorded from Europe, as well as, Asia, and, North America.

The infectious agent, *Echinococcus multiocularis*, is most commonly transmitted by foxes in Europe.

HOW IS HYDATIDOSIS TRANSMITTED?

In Europe, Hydatidosis is transmitted by the ingestion of eggs passed in the feces of infected

animals. Fecally soiled animal hair and environmental fomites can also serve as vehicles of infection. Human infections occur directly with hand to mouth transfer of the eggs or indirectly through contaminated food.

The adult tapeworm in the small intestines of canines produce eggs containing infective embryos (oncospheres), which are passed in feces. The eggs are capable of surviving for several months in pastures and gardens. When ingested by a susceptible intermediate host, including man, the eggs hatch, releasing oncospheres that migrate through the mucosa and are carried by the blood to various organs where they form cysts.

Canines become infected by eating viscera containing hydatid cysts. This most common source means of infection is through the consumption of small rodents in the genus *Clethrionomys* and *Microtus*. Humans become infected through ingestion of food items contaminated with feces containing parasite eggs. The primary mode of transmission in Europe is ingestion of wild growing berries which are contaminated with feces containing the eggs.

WHAT ARE THE SYMPTOMS?

This is a highly invasive, destructive disease. The cysts of *Echinococcus multiocularis* may take years to produce clinical symptoms. Many cysts are asymptomatic during the life of the infected individual and are sometimes found during autopsy, surgical operations or in radiographs taken for other reasons. The symptomatology depends on the location of the cyst and its size.

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masses. Metastases can occur, resulting in secondary cysts in other organs. Cysts are often confused with hepatic cirrhosis or carcinoma. This disease is often fatal.

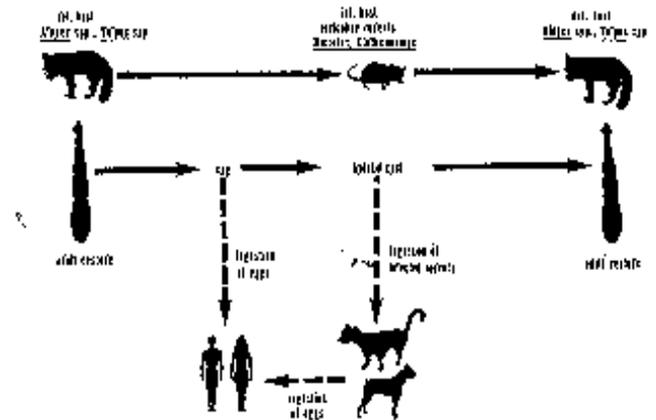
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HOW IS HYDATIDOSIS DIAGNOSED?

Diagnosis is often based on histopathology, i.e., evidence of the thin host pericyst and multiple microvesicles formed by external proliferation. Medical imaging is useful in the diagnosis. Specific diagnosis is by means of serologic tests or, after surgery, by identifying the larval stage of the parasite.



WHAT IS THE TREATMENT FOR HYDATIDOSIS?

Surgical resection of isolated cysts is the most common treatment, however, radical surgical excision is often unsuccessful. Treatment with mebendazole (Vermox®) and albendazole (Zentel®) have been used successfully and may be the preferred treatment in many cases. If a primary cyst ruptures, praziquantel (Biltricide®), a protoscolicidal agent reduces the probability of secondary cysts. For nonresponsive cases, continuous treatment with mebendazole (Vermox®) and possibly albendazole (Zentel®) may prevent progression of the disease.

HOW IS HYDATIDOSIS PREVENTED?

- 1) Educate the public at risk to avoid exposure to feces. **DO NOT** consume berries or other food items found growing in the wild. Hand washing should be emphasized.
- 2) Interrupt the transmission at home by not allowing pets to consume uncooked viscera.
- 3) Incinerate or deep-bury any potentially infected animal carcass.
- 4) Periodically treat household pets with a deworming medication approved by your veterinarian.
- 5) Field and laboratory personnel should observe strict safety precautions to avoid ingestion of tapeworm eggs.

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