Hydatid Disease

Hydatid disease, or cystic echinococcosis, is a parasitic infection caused by a tapeworm. It can cause cysts to grow in your liver and other organs. The infection is common in rural, underdeveloped areas where people raise livestock.

Overview

What is hydatid disease?

Hydatid disease is a parasitic infection caused by a tapeworm's eggs. Tapeworms usually live in hosts such as sheep and dogs. But humans can get the disease if they accidentally eat or drink anything infected with the parasite.

Hydatid disease, also called cystic echinococcosis or hydatidosis, causes cysts (liquid-filled growths) to develop in your liver or other organs. Hydatid cysts can lead to serious health complications if they aren't treated.

Who gets hydatid disease?

Hydatid disease tends to occur in rural, poor or underdeveloped areas. It's especially common among people who raise sheep or other livestock and also have dogs. Sheep are the primary host of the parasite and dogs get the parasite when they eat an infected sheep.

The risk of hydatid disease increases if you:

- Deworm or handle infected dogs at home.
- Drink or eat in a space shared with infected dogs.
- Live in an unhygienic environment.
- Slaughter your own sheep or other livestock for food.

Is hydatid disease contagious?

Hydatid disease isn't contagious, meaning it doesn't spread through person-to-person contact. So you can't get the disease by touching or being near someone who has it. A person has to ingest the parasite to get the infection.

What's the difference between cystic echinococcosis and alveolar echinococcosis?

Alveolar echinococcosis (AE) is another type of parasitic infection caused by tapeworms in the genus *Echinococcus*. But AE is usually transmitted to humans through foxes and coyotes, not sheep. AE is more serious than cystic echinococcosis (CE). AE can lead to cysts in your liver, lungs and brain. The cysts aren't cancerous but spread similarly to invasive tumors.

What's the difference between a hydatid cyst and a simple liver cyst?

A hydatid cyst is the result of a parasitic infection. Simple liver cysts, on the other hand, are usually present at birth. Hydatid cysts can grow large enough to affect liver function. Simple liver cysts rarely get this big. Hydatid cysts and simple liver cysts also require different treatments.

How common is hydatid disease?

Hydatid disease isn't common in North America. But it's a growing public health concern in poor and rural areas of Africa, Europe, Asia, the Middle East and Central and South America. Between 2 million and 3 million human echinococcal infections occur each year worldwide, and hydatid disease accounts for about 95% of those infections.

Symptoms and Causes

What are the symptoms of hydatid disease?

Hydatid disease may not cause any symptoms for many years. But as hydatid cysts grow in your liver, lungs or other organs they may cause:

- Bloody stools.
- Coughing.
- Discomfort in your abdomen or chest.
- Hives or skin rash.
- Jaundice (yellow skin).
- Lump or mass in your midsection.
- Nausea and vomiting.
- Shortness of breath.
- Unexplained weight loss.

What are the potential complications of hydatid disease?

The cysts can grow large enough to prevent affected organs from working properly. The cysts can also rupture, which can lead to life-threatening complications. Signs of a ruptured hydatid cyst may include:

- Anaphylaxis (serious allergic reaction).
- Severe abdominal pain.
- Sudden death.

How is hydatid disease transmitted?

People can get hydatid disease if they come into contact with the feces (poop) of a dog that contains the parasite's eggs. Over time, the parasites grow larger and turn into a cyst. Transmission can happen through:

- Drinking contaminated water.
- Eating infected soil found on vegetables, greens or berries.
- Petting or handling an infected dog.

Diagnosis and Tests

How is hydatid disease diagnosed?

Imaging exams and blood tests are the most common ways to diagnose hydatid disease. Blood tests can show elevated levels of antibodies to the echinococcal infection. Imaging exams show the size, shape and location of the cysts.

Your healthcare provider will use an X-ray, CT scan or ultrasound to examine the cysts. Hydatid cysts have a few characteristics that make them appear differently than simple liver cysts in imaging scans, including:

- Collapsed cyst inside the cyst wall.
- Multilayered cyst wall.
- Thick or calcified cyst wall.

Management and Treatment

How is hydatid disease treated?

Treatment for hydatid disease depends on the size and location of the cysts. The most common treatments include:

- **Medication:** Small, superficial cysts in one location may respond to antiparasitic drugs called benzimidazoles. Benzimidazoles destroy parasites and shrink cysts. Your healthcare provider may combine medication with aspiration or surgery.
- **PAIR (puncture, aspiration, injection, re-aspiration):** The PAIR technique uses a needle or catheter to drain the cyst. A parasite-fighting chemical is injected into the cyst before it's drained again. Your healthcare provider repeats the process until the cyst is completely emptied.
- **Surgery:** Large, deep cysts may need to be removed with surgery. Surgical cyst removal involves removing part or all of the cyst or part of your liver. Surgery risks spilling parasites into your abdominal cavity, so only an

experienced healthcare provider should perform the procedure.

Prevention

How can I prevent hydatid disease?

Preventing the spread of parasites is the only way to control hydatid disease. People at risk of contracting the infection should:

- Avoid eating or drinking anything that may have come into contact with dog feces.
- Have dogs dewormed by a trained veterinarian, not at home.
- Not have contact with dogs that may be infected.
- Not slaughter sheep or other livestock at home.
- Prevent dogs from eating infected sheep.
- Wash fruits and vegetables before eating them.
- Wash their hands with soap and water frequently, especially before preparing food or after handling dogs.

Outlook / Prognosis

What's the outlook for someone with hydatid disease?

Untreated hydatid disease can be fatal. Cysts may get so large that they cause the affected organ to stop functioning completely. Ruptured cysts can cause anaphylaxis, which is a life-threatening allergic reaction.

Living With

When should I see my healthcare provider about hydatid disease?

If you experience any of the symptoms of hydatid disease, see your healthcare provider right away. Tell them if you've been in a high-risk environment for hydatid disease. This information can help them distinguish between hydatid cysts and simple cysts. Early diagnosis and treatment greatly lower the risk of serious health complications or death.