CYSTICERCOSIS

Definition
Cysticercosis is an infectious disease caused by the parasite *Taenia solium*, which is a pork tapeworm. This parasite invades the nervous system and causes cysts to form in various parts of the body, including the eyes, muscles, brain, and nervous system. Cysticercosis is a major cause of epileptic seizures, especially in less-developed countries. Although the prognosis is usually good, cysticercosis can lead to serious consequences, including blindness, brain damage, and heart failure.

Causes
Cysticercosis is caused by ingestion of *T. solium* eggs, which are found in foods that have been contaminated or cooked improperly. Once consumed, the eggs hatch and their embryos penetrate the intestinal wall and enter the bloodstream.

Risk Factors
Risk factors for cysticercosis include eating meats, vegetables, or fruits that are contaminated with *T. solium*. Such contamination can occur if foods are not washed or cooked properly.

Symptoms
In many cases, cysticercosis does not produce symptoms. If the parasite invades muscle tissue, lumps may be visible beneath the skin. If the eyes are involved, symptoms may include blurred vision and detachment or swelling of the retina. If the disease invades the nervous system, it is often accompanied by seizures, headaches, brain swelling, and problems with balance.

Screening and Diagnosis
Establishing the diagnosis of cysticercosis can be challenging and require various tests. Blood tests can be used to detect antibodies to *T. solium*. Imaging studies can aid in visualizing the cysts (e.g., x-rays, computerized tomography, ultrasonography, magnetic resonance imaging). Biopsies can be performed on infected tissue. Electroencephalographs are useful if seizures are present. A spinal tap (lumbar puncture) may be appropriate for some patients.

Treatment and Therapy
Consultation with an infectious disease specialist is highly recommended. Treatment should be tailored to each patient, based on multiple factors, including the symptoms, the stage of cyst development, and the site and quantity of cysts. Treatment may involve corticosteroids, anticonvulsant medications, and antiparasitic agents. Although antiparasitic agents are effective for expelling parasites, they may produce a reactive localized inflammation. Multiple courses of treatment may be needed to fully eliminate the cysts. If seizures are present, referral to a neurologist is helpful for determining appropriate therapy. In some cases, surgery or shunting may be needed.
**Prevention**

Public education is extremely important for preventing cysticercosis. Proper handling and cooking of food is essential. Fruits and vegetables should be washed thoroughly. Raw or undercooked pork should not be consumed. The risk of person-to-person transmission can be reduced by exercising good personal hygiene, including frequent hand washing. A vaccination against *T. solium* is in development.

**Further Reading**


**Web Sites of Interest**

http://emedicine.medscape.com/article/215589-print


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