Taeniasis (taenia saginata)

ICD-10 B68.0: Taenia Solium Taeniasis

ICD-10 B68.1: Taenia Saginata Taeniasis

ICD-10 B69: Cysticercosis

Identification

Beef tapeworm and pork tapeworm.

Case classification:

• Suspect case: Clinical manifestations of infection with the adult worm, if present, are variable and may include nervousness, insomnia, anorexia, weight loss, abdominal pain and digestive disturbances.

• Probable case: In the presence of somatic cysticercosis, epileptiform seizures, headache, signs of intracranial hypertension or psychiatric disturbances strongly suggest cerebral involvement Neurocysticercosis.

• Confirmed case: Infection with an adult tapeworm is diagnosed by identification of proglottids (segments), eggs or antigens of the worm in the feces or on anal swabs. Specific diagnosis is based on the morphology of the scolex (head) and/or gravid proglottids.

Infectious agent

Taenia solium, the pork tapeworm, causes both intestinal infection with the adult worm and extra intestinal infection with the larvae (cysticerci). T. saginata, the beef tapeworm, only causes intestinal infection with the adult worm in humans.

Occurrence

Worldwide; frequent wherever beef or pork is eaten raw or insufficiently cooked and where sanitary conditions are lacking.

Reservoir

Humans are the definitive host of both species. Cattle are the intermediate hosts for T. saginata and pigs for T. solium.

Mode of transmission

Eggs of T. saginata passed in the stool of an infected person are infectious only to cattle, in the ﬂesh of which the parasites develop into cysticercus bovis, the larval stage of T. saginata. In humans, infection follows ingestion of raw or undercooked beef containing cysticerci; adult worm develops in the intestine.

3.14.6 Incubation period

Symptoms of cysticercosis may appear from weeks to 10 years or more after infection. Eggs appear in the stool 8-12 weeks after infection with the adult T. solium tapeworm, 10-14 weeks with T. saginata.

Period of communicability

T. saginata is not directly transmit- ted from person to person, but T. solium may be. Eggs of both species are disseminated into the environment as long as the worm remains in the intestine, sometimes more than 30 years; eggs may remain viable in the environment for months.

Susceptibility and resistance

Susceptibility is general. No apparent resistance follows infection; the presence of more than one tapeworm in a person has rarely been reported.

Methods of control

a Preventive measures

1 ) Educate the public to prevent fecal contamination of soil, water, and human and animal food; to avoid use of sewage efﬂuents for pasture irrigation; and to cook beef and pork thoroughly.

2) Appropriate measures to protect patients from themselves and their contacts are necessary.

3) Freezing beef at a temperature below -5°C (23°F) for more than 4 days kills the cysticerci effectively.

4) Inspection of the carcasses of cattle and swine will detect only a proportion of infected carcasses; these should be condemned, irradiated or processed into cooked products.

5) Prevent swine access to latrines and human feces.

3.14.9b Control measures

1) Report to local health authority: Selectively reportable.

2) Isolation: Not applicable. Stools of patients with untreated taeniasis due to T. solium may be infective.

3) Concurrent disinfection: Dispose of feces in a sanitary manner; emphasize strict sanitation, with hand washing after defecating and before eating, especially for T. solium.

4) Quarantine: Not applicable.

5) Immunization of contacts: Not applicable.

6) Investigation of contacts and source of infection: Evaluate symptomatic contacts.

7) Specific treatment: Praziquantel is effective in the treatment of T.saginata and T. solium intestinal infections. Niclosamide, no longer widely available, is an alternative.

3.14.10 Management of the disease

 Tapeworms are treated with medications taken by mouth, usually in a single dose. The drug of choice for tapeworm infections is praziquantal. Niclosamide can also be used. Patients with active CNS cysticercosis may benefit from treatment with praziquantel or albendazole under hospitalization; a short course of corticosteroids is usually given to control cerebral edema due to dying cysticerci. Where cysticidal treatment is not indicated, symptomatic treatment, such as with anti-epileptic drugs, may bring relief. In some cases surgical intervention may be needed to relieve symptoms.