Cestodiasis (Hymenolepis)

ICD-10 B71.0

3.13.1 Identification

Dwarf tapeworm infection.

Case classification:

• Suspected Case: abdominal pain and other vague symptoms such as pallor, loss of weight and weakness.

• Probable Case: An intestinal infection with very small tapeworms; light infections are usually asymptomatic. Massive numbers of worms may cause enteritis with or without diarrhea

• Confirmed Case: Microscope identification of eggs in feces confirms diagnosis.

3.13.2 Infectious agent

Hymenolepis nana (dwarf tapeworm), the only human tapeworm without an obligatory intermediate host.

3.13.3 Occurrence

Cosmopolitan; more common in warm than cold, and in dry than wet climates. Dwarf tapeworm is the most common human tapeworm in the USA and Latin America; it is common in Australia, Mediterranean countries, the Near East and India.

3.13.4 Reservoir

Humans, possibly mice.

3.13.5 Mode of transmission

Eggs of H. nana are infective when passed in feces. Infection is acquired through ingestion of eggs in contaminated food or water; directly from fecally contaminated fingers (autoinfection or person-to-person transmission); or ingestion of insects bearing larvae that have developed from eggs ingested by the insect. H. nana eggs, once ingested, hatch in the intestine, liberating oncospheres that enter mucosal villi and develop into cysticercoids; these rupture into the lumen and grow into adult tapeworms. Some H nana eggs are immediately infectious when released from the proglottids in the human gut, so autoinfection’s or person-to-person transmission can occur.

3.13.6 Incubation period

Onset of symptoms is variable; the development of mature worms requires about 2 weeks.

3.13.7 Period of communicability

As long as eggs are passed in feces. Infection may persist for years.

3.13.8 Susceptibility and resistance

Universal; infection produces resistance to reinfection. Children are more susceptible than adults; intensive infection occurs in immunodeficient and malnourished children.

3.13.9 Methods of control

3.13.9a Preventive measures

1) Educate the public in personal hygiene and safe disposal of feces.

2) Provide and maintain clean toilet facilities.

3) Protect food and water from contamination with human and rodent feces.

4) Treat to remove sources of infection.

5) Eliminate rodents from home environment.

3.13.9b Control measures

1) Report to local health authority: Official report not ordinarily justifiable, Class 5 (see Reporting).

2) Isolation: Not applicable.

3) Concurrent disinfection: Safe disposal of feces.

4) Quarantine: Not applicable.

5) Immunization of contacts: Not applicable.

6) Investigation of contacts and source of infection: Fecal examination of family or institution members.

3.13.9c Epidemic measures

Outbreaks in schools and institutions can best be controlled through treatment of infected individuals and special attention to personal and group hygiene.

3.13.10 Management of the disease

Specific treatment: Praziquantel or niclosamide is effective. Albendazole may be considered where intestinal helminthiases coexist.