Enterobiasis

ICD-10 B80

Identification

Pinworm disease

Case classification:

• Suspected Case: A common intestinal helminthic infection that is often asymptomatic. There may be perianal itching, disturbed sleep, irritability and sometimes secondary infection of the scratched skin.

• Probable Case: Other clinical manifestations include vulvovaginitis, salpingitis, and pelvic and liver granulomata. Appendicitis and enuresis have rarely been reported as possible associated conditions.

• Confirmed Case: applying transparent adhesive tape (tape swab or pinworm paddle) to the perianal region and examining the tape or paddle microscopically for eggs; the material is best obtained in the morning before bathing or passage of stools. Examination should be repeated 3 or more times before accepting a negative result. Eggs are sometimes found on microscopic stool and urine examination. Female worms may be found in feces and in the perianal region during rectal or vaginal examinations.

Infectious agent

Enterobius vermicularis, an intestinal nematode.

Occurrence

Worldwide, affecting all socioeconomic classes, with high rates in some areas. It is the most common worm infection in other countries of temperate climate; prevalence is highest in school-age children (in some groups near 50%),. Infection often occurs in more than one family member.

Reservoir

Humans. Pinworms of other animals are not transmissible to humans.

Mode of transmission

Direct transfer of infective eggs by hand from anus to mouth of the same or another person, or indirectly through clothing, bedding, food or other articles contaminated with parasite eggs. Dust borne infection is possible in heavily contaminated households and institutions. Eggs become infective within a few hours after being deposited at the anus by migrating gravid females.

3.12.6 Incubation period

The life cycle requires 2-6 weeks. Symptomatic disease with high worm burdens results from successive reinfection occurring within months following initial exposure.

Period of communicability

As long as gravid females discharge eggs on perianal skin. Eggs remain infective in an indoor environment for about 2 weeks.

Susceptibility and resistance

Universal. Differences in frequency and intensity of infection are due primarily to differences in exposure.

Methods of control

a Preventive measures

1) Educate the public in personal hygiene, particularly the need to wash hands before eating or preparing food. Keep nails short; discourage nail biting and scratching anal area.

2) Remove sources of infection through treatment of cases.

3) Daily morning bathing, with showers (or stand-up baths) preferred to tub baths.

4) Change to clean underclothing, nightclothes and bed sheets frequently, preferably after bathing.

5) Clean and vacuum house daily for several days after treatment of cases.

6) Reduce overcrowding in living accommodations.

7) Provide adequate toilets; maintain cleanliness in these facilities.

b Control measures

1) Report to local health authority: Official report not ordinarily justifiable.

2) Isolation: Not applicable.

3) Concurrent disinfection: Change bed linen and underwear of infected person daily for several days after treatment, avoiding aerial dispersal of eggs. Use closed sleeping garments. Eggs on discarded linen are killed by exposure to temperatures of 55°C (131°F) for a few seconds; either boil bed clothing or use a washing machine on the "hot" cycle. Clean and vacuum sleeping and living areas daily for several days after treatment.

4) Quarantine: Not applicable.

5) Immunization of contacts: Not applicable

6) Investigation of contacts and source of infection: Examine all members of an affected family or institution.

7) Specific treatment: Pyrantel pamoate, mebendazole or albendazole. Treatment to be repeated after 2 weeks; concur- rent treatment of the whole family may be advisable if several members are infected.

3.12.9c Epidemic measures

Multiple cases in schools and institutions can best be controlled through systematic treatment of all infected individuals and household contacts.

3.12.10 Management of the disease

 The main treatment is a single dose of either mebendazole or albendazole, which kill the pinworms (not the eggs).

 More than one household member is likely to be infected, so the entire household is often treated. The single-dose treatment is often repeated after 2 weeks. This treats worms that hatched since the first treatment.

 To control the eggs:

o Clean toilet seats daily

o Keep fingernails short and clean

o Wash all bed linens twice a week

o Wash hands before meals and after using the toilet

 Avoid scratching the infected area around the anus. This can cause contamination and fuel transmission.

 Keep hands and fingers away from nose and mouth unless freshly washed. Carry out these measures while family members are being treated for pinworms.