Strongyloidiosis

ICD-10 B78

Identification

Case classification:

• Suspected Case: asymptomatic helminthic infection of the duodenum and upper jejunum. Clinical manifestations include transient dermatitis when larvae of the parasite penetrate the skin on initial infection;

• Probable Case: cough, and sometimes demonstrable pneumonitis , abdominal pain (usually epigastric, diarrhea and urticaria; nausea, weight loss, vomiting, weakness and constipation.

• Confirmed Case: identifying larvae in concentrated stool specimens (motile in freshly passed feces), in duodenal aspirates or, occasionally, in sputum. feces may show developing stages of the parasite, Serological tests based on larval stage antigens are positive in 80%-85% of infected patients.

Infectious agent

Strongyloides stercoralis

Occurrence

Throughout tropical and temperate areas; more common in warm, wet regions.

3.11.4 Reservoir

Humans are the principal reservoir, with occasional transmission of dog and cat strains to humans.

Mode of transmission

Infective (filariform) larvae develop in feces or moist soil contaminated with feces, penetrates the skin, enters the venous circulation and are carried to the lungs. They penetrate capillary walls, enter the alveoli, ascend the trachea to the epiglottis and descend into the digestive tract to reach the upper part of the small intestine, where development of the adult female is completed. The adult worm, female, lives embedded in the mucosal epithelium of the intestine, especially the duodenum, where eggs are deposited. These hatch and liberate rhabditiform (non infective) larvae that migrate into the intestinal lumen, exit in feces and develop after reaching the soil into either infective filariform larvae (which may infect the same or a new host) or free-living male and female adults. The free-living fertilized females produce eggs that hatch and liberate rhabditiform larvae, which may become filariform larvae within 24-36 hours. In some individuals, rhabditiform larvae may develop to the infective stage before leaving the body and penetrate through the intestinal mucosa or perianal skin; the resulting autoinfection can cause persistent infection for many years.

Incubation period

From penetration of the skin by filariform larvae until rhabditiform larvae appear in the feces takes 2-4 weeks; the period until symptoms appear is indefinite and variable.

Period of communicability

As long as living worms remain in the intestine; up to 35 years in cases of autoinfection.

Susceptibility and resistance

Universal.

Methods of control

a Preventive measures

1) Dispose of human feces in a safe manner.

2) Attention to hygienic habits.

3) Examine and treat infected dogs, cats and monkeys in contact with people.

b Control measures

1) Report to local health authority.

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.

7) Specific treatment: Because of the potential for autoinfection and dissemination, all infections, regardless of worm burden, should be treated.

3.11.10 Management of the disease

Ivermectin, thiabendazole and albendazole are the most effective medicines for treating the infection. Albendazole is considered the least effective. Ivermectin, the drug of choice, is not available in all endemic countries. Moreover, the optimal schedule has yet to be defined.