Strongyloides stercoralis

Strongyloides stercoralis	
Nematode (nematode)	
 Strongyloididae	
Adult parasite	
Occurrence	especially in tropical and subtropical areas
Disease	strongyloidosis
Infectious stage and method of infection	larva (percutaneous)
Diagnostics	stool larvae detection, detection of specific antibodies, detection of parasitic DNA, marked eosinophilia and leukocytosis
Therapy	Thiabendazole, Albendazole, Mebendazole
MeSH ID	68017171

Strongyloides stercoralis or intestinal nematode is a small worm causing strongyloidosis. It belongs to Nematoda - nematodes. It usually lives in the outdoor environment - in humid tropical, subtropical areas, but also in cold areas. If the larvae encounter a human at the stage, they will attack it.

Life cycle

They are **small worms with a size of 0.8–2.2 mm** with a complex evolution. Upon contact with humans, they actively penetrate the skin and enter the bloodstream. They get **through the lungs through the blood** , where they irritate the airways and force a person to cough. **They enter the esophagus** through the alveoli, bronchi and trachea . They then settle in the small intestine, where the larvae mature, copulate and begin to **produce eggs** . Eggs enter the stool or may hatch in the host's digestive tract.

⚠ If a person is not immunocompetent enough, the eggs hatch in the GIT and the larvae penetrate the wall into the bloodstream, where they migrate to various tissues.

Clinical signs

The patient's clinical symptoms depend on where the parasite is located.

Egg *Strongyloides* sp.

Skin phase

- - Itching on the skin.
  - Macroscopically visible path.
  - Local edema .

Pulmonary phase

The pulmonary phase usually manifests itself as 6-9. the day after infection .

- Cough, shortness of breath .
- Massive infections manifest as hemorrhagic pneumonia or bronchopneumonia.

GIT phase

We already have pathogenic agents in the digestive tract that cause problems. Females settle in Lieberkühn's crypts and produce eggs. Hatched larvae can invade the mucosa again, causing multiple ulcerations and subsequent wall thickening. Clinically, this will manifest itself as:

- abdominal pain in the epigastrium,
- diarrhea,
- bleeding into the GIT.

⚠Hyperinfection syndrome is the result of disseminated strongyloidosis (dissemination of larvae throughout the body, affected liver, heart, lungs, gallbladder and intestines) in immunosuppressed individuals (AIDS). In these people, the disease is severe. Severe diarrhea, ileus and bronchopneumonia are common.

Diagnostics

- Microscopy: detection of larvae in stool about 27 days to 1 month after infection.
- Detection of specific antibodies .
- Detection of parasitic DNA (not performed in the Czech Republic).
- Laboratory tests: marked eosinophilia and leukocytosis, decrease in values in the chronic phase of infection.

Therapy

- Albendazole
- Thiabendazole
- Ivermectin
- Levamisole

Links

related articles

- Diarrheal diseases : Viral gastroenteritis ■ Bacterial gastroenteritis ■ Gastrointestinal parasitosis ■ Enterotoxicosis ■ Drug-induced diarrhea ■ Differential diagnosis of diarrheal diseases ■ Treatment of diarrheal diseases

Source

- CHANOVÁ, Marta. *Diseases caused by nematodes* [lecture on the subject Parasitology, General Medicine, 1st Medical Faculty, Charles University]. Prague. 12/10/2015
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Reference

1. VOLF, Petr and Petr HORÁK. *Parasites and their biology.* 1st edition. Prague: Triton, 2007. 318 pp. 209–210. ISBN 978-80-7387-008-9 .
2. ↑ FÖRSTL, Miroslav, Vladimír BUCHTA and Libuše KOLÁŘOVÁ. Overview of diagnostics and therapy of intestinal parasitosis. *Internal medicine for practice.* 2004, vol. 6, vol. 4, pp. 209, ISSN 1803-5256.

References

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- BEDNÁŘ, Marek, A SOUČEK and V FRAŇKOVÁ, et al. *MEDICAL MICROBIOLOGY: Bacteriology, virology, parasitology.* 1st edition. Triton, 1996. 560 pp. ISBN 859-4-315-0528-0 .

Parasites			
Protozoa (Protozoa)	Amoeboid protozoa	Exchange offices	*Acanthamoeba spp.* • *Balamuthia mandrillaris* • *Naegleria fowleri*
	Whips	Leishmania	*Leishmania braziliens* • *Leishmania donovani* • *Leishmania infantum* • *Leishmania major* • *Leishmania tropica*
		intestinal parasites	*Dientamoeba fragilis* • *Entamoeba histolytica* • *Giardia intestinalis*
		Trichomonads	*Trichomonas vaginalis*
		Trypanosomes	*Trypanosoma cruzi* • *Trypanosoma gambiense* • *Trypanosoma rhodensiense*
	Rinning	*Balantidium coli*	
	Sporozoa	Babesie	*Babesia bovis* • *Babesia divergens* • *Babesia microti*
		Coccidia	*Cryptosporidium parvum* • *Cyclospora cayetanensis* • *Isospora belli*
		Microsporidia	*Enterocytozoon bieneusi* • *Encephalitozoon spp.*
		interhost	*Toxoplasma gondii*
		Plasmodia	*Plasmodium falciparum* • *Plasmodium malariae* • *Plasmodium ovale* • Plasmodium vivax
Helmint	Trematoda (Motolice)	liver and lung mites	*Clonorchis sinensis* • *Fasciola hepatica* • *Opistorchis spp.* • *Paragonimus spp.*
		Schistosomes	*Schistosoma haematobium* • *Schistosoma japonicum* • *Schistosoma intercalatum* • *Schistosoma mansoni* • *Schistosoma mekongi*
		intestinal tapeworm	*Fasciolopsis buski* • *Heterophyes heterophyes* • *Metagonimus yokogawai*
	Nematode (Nematode)	Filaria	*Brugia malayi* • *Dirofilaria immitis* • *Dirofilaria repens* • *Loa loa* • *Mansonella perstans* • *Onchocerca volvulus* • *Wuchereria bancrofti*
		intestinal nematodes	*Ancylostoma duodenale* • *Ascaris lumbricoides* • *Enterobius vermicularis* • *Necator americanus* • *Strongyloides stercoralis* • *Trichuris trichuria*
		tissue nematodes	*Dracunculus medinensis* • *Toxocara spp.* • *Trichinella spiralis*
	Cestoda (Tasemnice)	intestinal cestodes	*Diphyllobothrium latum* • *Dypilidum caninum* • *Hymenolepis nana* • *Taenia saginata* • *Taenia solium*
		tissue cestodes	*Echinococcus granulosus* • *Echinococcus multilocularis* • *Taenia solium*

Arthropods	Insect	*Anoplura* (lice) • *Diptera* (diptera) • *Cimex lectularius* • *Siphonaptera* (fleas)
	Spiders	*Ixodes ricinus* • *Sarcoptes scabiei*
Intracellular parasites	Chlamydia	*Chlamydia pneumoniae* • *Chlamydia psittaci* • *Chlamydia trachomatis*
Portal: Microbiology		

Category :

- Infectious medicine
- Microbiology
- Parasites