

Dirofilariasis

Dirofilariasis is a disease caused by **Dirofilaria repens** or **Dirofilaria immitis**. They are thin white worms and belong to the filaria. They commonly attack **beasts**, mainly canine and feline. Man is a **random host**, in man the larva does not mature. The source of the infection is a mosquito (vector).

Dirophilariasis is one of the so-called **emerging infectious diseases**. It is an infectious disease that is observed **worldwide** and is often known to be closely linked to human travel, animal movements and global climate change, especially global warming. ^[1]

Life cycle

The larvae develop in mosquitoes for 15-18 days. As soon as a mosquito bites a human, the larvae enter the skin and into the blood. The larvae in humans do not mature in the adult, but nest in some organ, where they **form nodules**. They most often affect the subcutaneous tissue, lungs, heart or eyes. They can also become trapped in lymph nodes and in the abdomen.

Clinical signs

Dirofilaria repens

- In the Czech Republic it is more common than *Dirofilaria immitis* (in the Czech Republic only 5 cases, but it is still expanding and is approaching the Czech Republic from the classic places of occurrence).
- The most common cause of symptomatic heartworm disease. ^[1]
- When infected, a person forms nodules in the skin, in the orbit area, in the vitreous, conjunctiva and eyelid.

Dirofilaria immitis

- Czech **hairy dogs**.
- It is often called a '**heartworm**' because it is very fond of settling in the heart and causing cardiopulmonary damage (in the dog).
- However, it most often causes *asymptomatic infections* in humans and dogs. ^[1]
- In humans, the larva is most often caught in the subcutaneous tissue, eye or lungs, where it forms nodules.

⚠ Heartworm infections can elicit a **strong immune response** and this may be related to some other symptoms located outside the affected area. ^[1]

Diagnostics

- **Microscopic examination** collected tissues (biopsy, excision).
- Detection of specific antibodies (serum, vitreous) or DNA parasite.

Therapy

- **Anthelmintics** (ivermectin, diethylcarbamazine), which damage worm muscle. ^[1]
- Surgical removal of the worm.

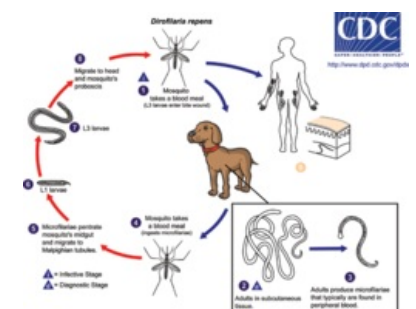
Prevention

Cases of heartworm disease are likely to increase due to the spread of the parasite itself and the ever-increasing travel of people with pets (dogs and cats). Travelers should also protect themselves from mosquitoes in non-malarial areas. ^[1]

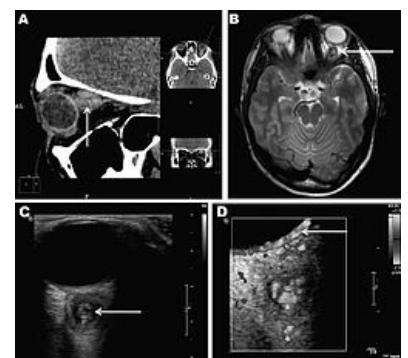
Links

related articles

- Filaria
- Loa loa



Life cycle *Dirofilaria repens*



Eye heartworm caused by *Dirofilaria repens*

- Onchocercosis

Reference

DITRICH, O. Case of heartworm disease imported from Greece (Brief introduction to heartworm disease in humans and case report) . Paper presented at the Travel Medicine Conference: parasites becoming more and more topical. Prague. April 7, 2009. Also available from < <http://www.parazitologie.cz/akce/doc/sbornik/sbornik.pdf> >.

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Used literature

CHANOVÁ, Marta. Diseases caused by nematodes III (Filaria) [lecture on the subject Parasitology, General Medicine, 1st Medical Faculty, Charles University]. Prague. 11/23/2015

- CHANOVÁ, Marta. *Diseases caused by nematodes III (Filaria)* [lecture for subject Parasitology, specialization General medicine, 1. LF Charles University]. Prague. 23/11/2015.