Filariasis is a parasitic disease caused by thread-like filarial nematodes (roundworms) in the family Filarioidea (also known as 'filariae').[1] Of the hundreds of described filarial parasites, only 8 species cause natural infections in humans (see separate articles Lymphatic Filariasis and Cutaneous Filariasis).[2] Body cavity filariasis is caused by the worms *Mansonella perstans* and *Mansonella ozzardi*.[3]

**Life cycles**[3]

- Infective larvae are transmitted by infected arthropods during a blood meal. The larvae migrate to the appropriate site of the host's body, where they develop into microfilariae-producing adults.
- The adult worms of *M. ozzardi* live in the abdominal cavity of the human host, living within the mesenteries, peritoneum and in the subcutaneous tissue. The adult worm can live for several years.
- *M. perstans* adult worms live in body cavities, most often the peritoneal cavity or pleural cavity and, less frequently, in the pericardium.
- The female worms produce microfilariae which circulate in the blood. The microfilariae infect biting arthropods (midges for *M. perstans* and both midges and blackflies for *M. ozzardi*).
- Inside the arthropod, the microfilariae develop within 1 to 2 weeks into infective filariform (third-stage) larvae. During a subsequent blood meal by the insect, the larvae infect the vertebrate host.
- The larvae then migrate to the appropriate site of the host's body, where they develop into adults.

**Epidemiology**[3]

- There are very few prevalence data because mansonellosis is often asymptomatic.
- *M. perstans* occurs in both Africa and South America.
- *M. ozzardi* occurs in Central America and South America.
- Mansonellosis is particularly common in Central Africa and around the Amazon basin.

**Presentation**[3]

- Mansonellosis is most often asymptomatic or a benign self-limiting illness.
- Infections by *M. perstans* may be associated with angioedema, pruritus, fever, headaches, arthralgia, and neurological manifestations.
- *M. ozzardi* can cause symptoms that include arthralgias, headaches, fever, pulmonary symptoms, lymphadenopathy, hepatomegaly and pruritus.

**Investigations**

- Identification of microfilariae by microscopic examination is the most practical diagnostic procedure.
- Examination of blood samples will allow identification of microfilariae of *M. perstans* and *M. ozzardi*. A thick smear, stained with Giemsa or haematoxylin and eosin is often used.
- Antigen detection using an immunoassay for circulating filarial antigens is useful because microfilaremia can be low and variable.
Antibody detection is of limited value. Substantial antigenic cross-reactivity exists between filaria and other helminths, and a positive serological test does not distinguish between past and current infection.

**Management**

- **Albendazole** or **mebendazole** are effective for the treatment of *M. perstans*.
- The drug of choice for treating *M. ozzardi* is a single dose of **ivermectin**.

**Prevention**

- Prevention of **insect bites** by wearing long-sleeved shirts, not wearing short trousers and the use of insect repellants.
- Widespread application of insecticides to specific breeding sites has been used.

**Further reading & references**

- Parasites A-Z; Centers for Disease Control and Prevention

1. Wayanganka S et al; Filariasis, Medscape, May 2013
2. Wayangankar S et al; Filariasis, eMedicine, Nov 2009
3. Lymphatic Filariasis; DPDx, Centers for Disease Control and Prevention

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