eWHORM

Mansonellosis: Factsheet

Parasitic worm infections are among the most widespread neglected tropical diseases, affecting **hundreds of millions of people worldwide**, primarily in sub-Saharan Africa and other tropical regions.

One of these infections is **Mansonellosis** — a largely overlooked filarial disease that affects millions of people and remains one of the least understood and least addressed parasitic worm infections.

What Causes Mansonellosis?

Mansonellosis is caused by parasitic worms of the genus *Mansonella*. Three species infect humans, with *Mansonella perstans* — the focus of eWHORM — being the most widespread in Africa.

How Is It Transmitted?

Transmission occurs through the bite of infected **midges** (*Culicoides* spp.), which are the main vectors for all three *Mansonella* species. In parts of Latin America, **blackflies** (Simuliidae) also contribute to transmission of *M. ozzardi*.

Who Is Affected?

- More than **100 million people may be infected with *M. perstans*** globally (2011 estimate).
- An estimated **580 million people in Africa alone live at high risk of infection.**
- The disease is endemic across **West, East, and Central Africa**, with a wide distribution in wet subtropical and tropical regions from **Senegal to Zimbabwe**.
- It is also present in **neotropical regions of Central and South America**, where it was likely introduced.

What Happens in the Body?

Most *Mansonella* infections are considered **mild or asymptomatic**, particularly in individuals living long-term in endemic areas.

When symptoms occur, they may overlap with other filarial infections, making diagnosis challenging.

Reported clinical features include:

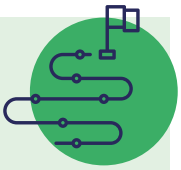
- Transient subcutaneous swellings (similar to those seen in loiasis)
- Pericarditis and pleuritis
- Fever
- Fatigue
- Pruritus (itching)
- Arthralgia (joint pain)
- Abdominal pain
- Headache
- Occasionally reported neuropsychiatric symptoms

Symptoms are thought to be related to immune responses to migrating adult worms and circulating microfilariae. Mansonella is, like all filarial nematodes, a strong immunomodulator. It is expected to impair responses to vaccine treament and increase the risk of or lead to severe disease outcomes in HIV, tuberculosis or malaria.

Current Treatment

There are no international guidelines defining a standard treatment regimen. No mass drug administrations (MDA) are performed for mansonellosis. Drugs used for MDA have only limited efficacy and do not kill the adult filariae. **Doxycycline** therapy was shown to clear microfilariae for at least two years, but requires a daily six-week therapy, which limits its use on a broader scale.

Remaining Challenges



- Often asymptomatic, leading to underdiagnosis and underreporting
- Overlapping symptoms with other filarial diseases complicate diagnosis
- No established standard treatment
- Limited inclusion in large-scale control programmes

We at eWHORM are generating the clinical evidence needed to support the registration of oxfendazole (OXF) as a broad-spectrum treatment for multiple worm infections, including Mansonellosis. This would be a major step toward achieving WHO's 2030 goals to eliminate filarial and soil-transmitted helminth infections and strengthen health systems in endemic countries.

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