Onchocerciasis and the Right to Clean Water

Claire Danielson 1, Rose Hildebrandt 2, Timothy Stone 3

Biological Sciences 1, Cognitive and Learning Sciences 2, and Social Sciences Departments 3

Quick Facts

- Onchocerciasis is a disease caused by a parasitic worm spread by the bite of infected flies.
- The disease is also known as “River Blindness” because these flies breed in streams and rivers and advanced stages of the disease are characterized by blindness.
- Black flies are the vector for *Onchocerca volvulus*, a parasitic worm.
- Blindness is caused by inflammation due to dead larvae in the eye.
- Onchocerciasis is a Neglected Tropical Disease (NTD).

Prevention and Control

Currently there is no vaccine or medication to prevent infection with *O. volvulus*. The best protection is avoiding the biting flies completely. Other options include treating water to eradicate the flies as well as bringing in clean water to those living near infected bodies of water. Vector control methods were utilized in West Africa and were found to be highly effective, but due to funding shortages these methods could not be used in other areas.

Distribution

- All ages are affected by Onchocerciasis.
- Risk of infection is highest in those living and working near infected bodies of water (fishermen and farmers), travelers to the area for extended amounts of time (including missionaries and those in the Peace Corps).

Symptoms

People with heavy infections generally have one or more of three conditions:
- 1. Skin rash
- 2. Eye disease
- 3. Nodules under the skin

Onchocerciasis also has an important socio-cultural impact on self-esteem, education, and work. Physical impairments resulting from the disease can leave people unable to provide for themselves.

1. Skin rash
2. Eye disease
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Common medicines used to treat Onchocerciasis include:
- Ivermectin: this treatment kills larvae and prevents them from causing damage. Treatment must continue for up to 15 years as the adult worms may live that long.
- Doxycycline: this treatment kills the Wolbachia bacteria that adult worms survive on.

As Onchocerciasis is an NTD, it has not historically been prioritized by governments.

Treatment

People infected by river blindness and other NTDs often find themselves facing lifelong physical impairment; they may be unable to go to school or work and become trapped in a cycle of poverty and social isolation. Many NTDs, including Onchocerciasis, are treatable and preventable but lack the funding necessary to treat the affected communities. With a little concentration on Onchocerciasis, millions of people can be saved from the health and social outcomes of the disease.

Future Outlook

- Vision 2020: eliminate the main causes of preventable and treatable blindness as a public health issue by the year 2020.
- Expansion of onchocerciasis control activities worldwide including the support of WHO and several other agencies (OEPA, OCP, APOC).

References and Acknowledgements