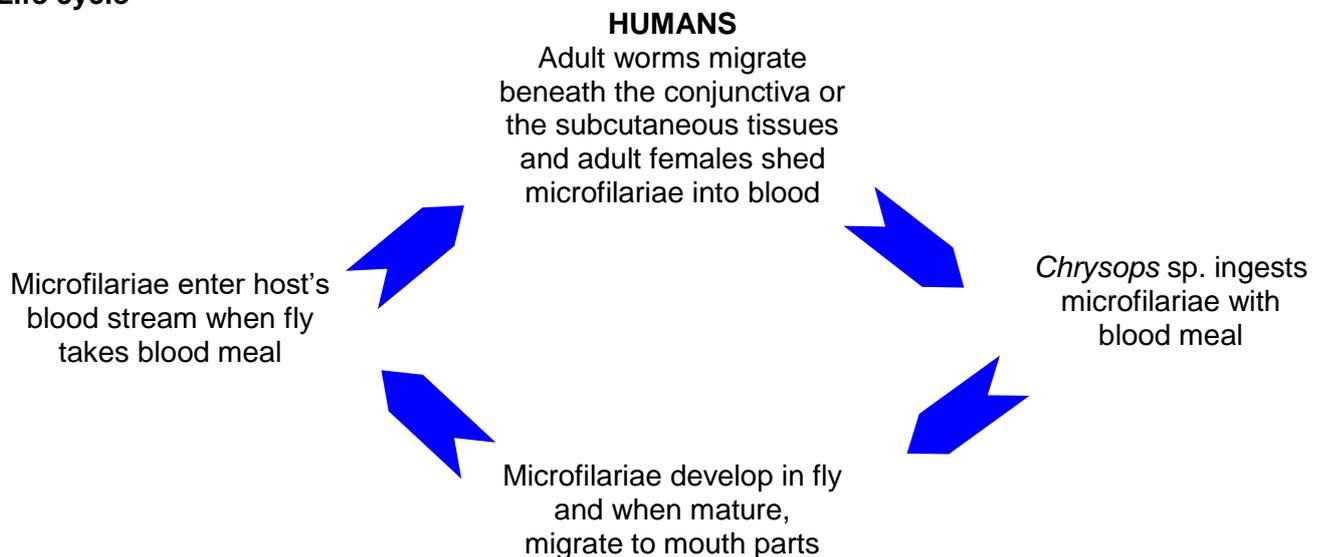


Microfilariae of *Loa loa*

Introduction

Loa loa, also known as the African eye worm, is a filarial nematode endemic in the rain forests of West and Central Africa. It is transmitted by mango flies or *Chrysops* species and humans are the only known reservoir. The microfilariae exhibit diurnal periodicity, the highest numbers being detected in blood between 10am and 2 pm.

Life cycle



Morphology

The microfilariae of *Loa loa* are 250 - 300 μ . They possess a sheath which stains blue-grey with Delafield's haematoxylin. The tail gradually tapers to a rounded end, the densely packed nuclei extending to the tip.

Clinical disease

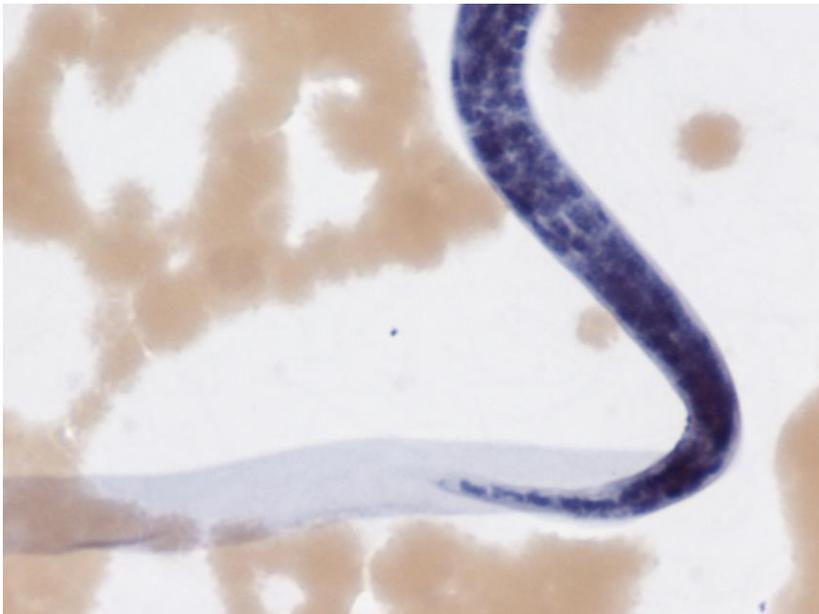
Many patients infected with *Loa loa* appear to be asymptomatic and the migration of the adult worm through the subcutaneous tissues often goes unnoticed, unless passing beneath the conjunctiva of the eye. Hypereosinophilia and increased antibody levels, especially IgE are also noted.

The most common pathology associated with *Loa loa* infections are Calabar swellings, which are inflammatory swellings resulting in a localised subcutaneous oedema. These swellings are due to the host's response to the worm or its metabolic products and can be found anywhere in the body but most commonly in the extremities. They develop rapidly and last one to three days, usually accompanied by localised pain, urticaria and pruritis.

Serious complications such as cardiomyopathy, encephalopathy, nephropathy and pleural effusion are recorded.

Laboratory diagnosis

When filariasis is suspected, a geographical and clinical history helps to determine the most appropriate collection time. Thick and thin blood films can be examined. However this is an insensitive method due to the low microfilaraemia, and larger volumes of blood need to be examined as in the methods described in pages.



Note the nuclei present at the tip of the tail

Sheath stained with Delafield's haematoxylin.