

# Anterior Chamber Live *Loa loa*: Case Report

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**ABSTRACT:** We reported a case of unusual intraocular *Loa loa* in a 27-year-old patient who presented with painful red eye. Biomicroscopy revealed a living and active adult worm in the anterior chamber of the right eye. After surgical extraction under local anesthesia, parasitological identification confirmed *L. loa* filariasis.

**KEYWORDS:** intraocular live *Loa loa*, red eye

**CITATION:** Kagmeni et al. Anterior Chamber Live *Loa loa*: Case Report. *Clinical Medicine Insights: Case Reports* 2016;9:55–56 doi: 10.4137/CCRep.S40012.

**TYPE:** Case Report

**RECEIVED:** April 27, 2016. **RESUBMITTED:** June 19, 2016. **ACCEPTED FOR PUBLICATION:** June 23, 2016.

**ACADEMIC EDITOR:** Athavale Nandkishor, Associate Editor

**PEER REVIEW:** Four peer reviewers contributed to the peer review report. Reviewers' reports totaled 623 words, excluding any confidential comments to the academic editor.

**FUNDING:** Authors disclose no external funding sources.

**COMPETING INTERESTS:** Authors disclose no potential conflicts of interest.

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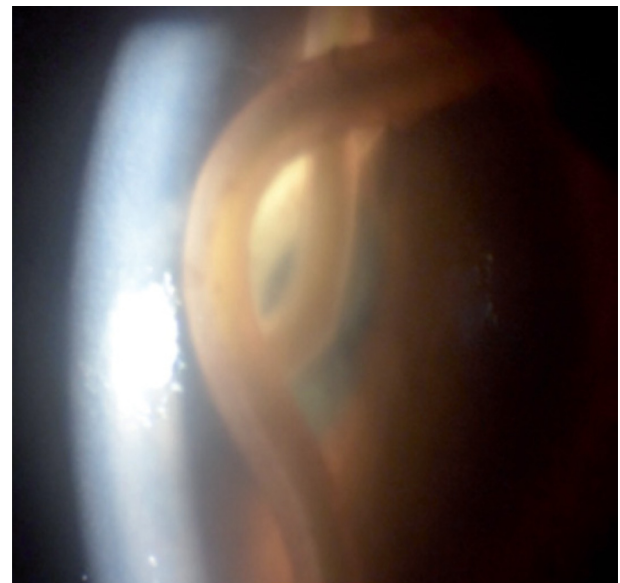
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## Introduction

*Loa loa* is endemic in western and central Africa, where about 10 million people are estimated to be infected. In Cameroon, the prevalence of loiasis depends on the bioecological zone. It varies from 0% in the grassland savannah, 6.6% in the deciduous equatorial rainforest, and 9.7% in the dense-humid equatorial rainforest to 33.3% in the forested savannah.<sup>1</sup> Intraocular infestation by live *L. loa* is a rare occurrence. Two previous cases have been reported in Cameroon in children, initially by Lucot et al.<sup>2</sup> and later by Eballe et al.<sup>3</sup> The severity of the clinical manifestations and complications depend on many factors, including the localization of the worm and the duration of symptoms. We reported a case of a patient who presented with a live *L. loa* in the anterior chamber and who underwent surgical removal using local anesthesia.

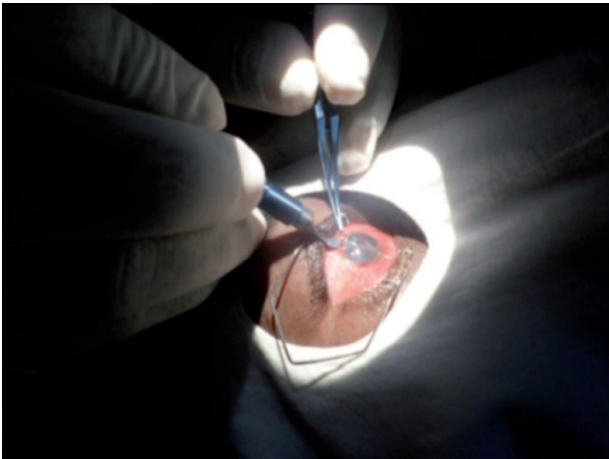
## Case Report

A 27-year-old Cameroonian farmer living in Saa (Lekie Department) presented at the University Teaching Hospital Yaoundé with complains of sudden redness, pain, and lacrimation in the right eye for 3 days. Past medical history revealed a few episodes of fugitive itchy swelling below the skin. Visual acuity (VA) was hand motion on the affected right eye and 1.0 on the left eye. Intraocular pressure was taken by non-contact tonometer, which was 18 mmHg on the affected eye and 14 mmHg on the controlateral eye. Slit-lamp examination revealed conjunctival hyperhemia, edema of corneal stroma, and a moving white object in the anterior chamber (Fig. 1). Iris was normal and the lens was clear. The left eye was normal. The diagnosis of a live anterior chamber worm was considered. Emergency removal of the worm was performed in the the-



**Figure 1.** Intraocular adult *Loa Loa* worm in the anterior chamber.

ater through a 2.8 mm clear corneal tunnel under retrobulbar anesthesia (Fig. 2). The procedure ended with an anterior chamber washout, followed by a subconjunctival injection of a combination of steroids and antibiotics. Postoperative treatment included dexamethasone eye drops six times per day, tropicamide 0.5% one drop two times per day, and a combination of steroid and antibiotic ointment for evening. This medication was slowly tapered down, and at postoperative day 10, slit-lamp examination revealed a calm anterior chamber with 1.0 VA. At the last follow-up visit (3 months postoperatively), the right eye was quiet, with full VA. Postoperatively,



**Figure 2.** Limbal incision of 2,8 mm at 12 o'clock position.

macroscopic parasitological examination revealed a 6.5 mm in length and 0.5 mm in wide round, whitish worm that was identified as mature female *L. loa*. Laboratory investigation in peripheral blood showed a positive eosinophilia. Although blood film examination for microfilaria during day time was negative, the patient was given a specific systemic *L. loa* medication diethylcarbamazine 2 mg/kg body weight three times a day for 3 weeks associated with prednisolone 20 mg daily for 21 days.

## Discussion

In the current case, the patient lives in the degraded forest area of the Lekie division, areas in which the prevalence of *L. loa* is particularly high.<sup>4</sup> Ocular manifestation of loiasis has been documented mostly in the developing countries.<sup>2,3,5</sup> This rare manifestation can occur at any age. In two previous cases reported in Cameroon, the patients were aged 14 and 18 months.<sup>2</sup> In the current study, the patient age was similar to that reported by Yusoff et al.<sup>6</sup> Age appears to be a factor of early presentation. Children usually do not complain, and this can explain the gap between the onset and the diagnosis of the case reported by Ombgwa et al.<sup>3</sup> Our patient presented with painful red eye with a severe decrease in VA. These signs could mimic other eye pathologies. Careful slit-lamp examination was the key to diagnosis. A decrease in VA observed in this case was more linked to the central position (in the visual axis) of the worm at presentation. Surgical removal of the worm was curative and relatively simple and should be done as soon as possible to prevent structural damages in the anterior chamber. In developing countries, this procedure can be delayed in young patients because of the lack of general anesthesia. In our case, worm removal was done under local anesthesia. Our patient did not develop complications owing to the early presentation and adequate management. However, uveitis with hypopyon and secondary cataract with corneal edema were

the reported complications in patients who were diagnosed after long symptomatic periods.<sup>2,7</sup> One case of blindness following anterior chamber filariasis has been reported by Osuntokun et al.<sup>7</sup> Early surgical removal of the adult worm from the anterior chamber surely prevents severe complications, but the probability of further recidives is possible, as another adult worm can migrate into the anterior chamber the next day. Although there is no specific program to control *L. loa* infection in Cameroon, this filariasis has largely benefited from the African Program for Onchocerciasis Control. Since severe adverse reactions have been reported in people who take ivermectin for the treatment of onchocerciasis and who have highly coinfecting with *L. loa*,<sup>8</sup> it is important to assess the level of loiasis endemicity in a community before initiating mass treatment against onchocerciasis. The treatment of loiasis can be difficult and often requires advice from an expert in infectious diseases or tropical medicine. The treatment of choice is diethylcarbamazine, which kills the microfilaria and adult worms.

## Conclusion

Ophthalmologists from endemic areas need to be aware of this diagnosis that can mimic other eye pathologies. Careful examination, prompt diagnosis, and early surgical removal of the worm from anterior chamber can reduce ocular morbidity. Systemic therapy may be required to cure the infection. The examination of the worm is better to be made by an experienced parasitologist, and treatment is better to be made by an experienced ophthalmologist in conjunction with an infectiologist.

## Author Contributions

Examined, evaluated the patient, and wrote the article: GK. Examined and evaluated the patient: RC, YB, WP. All authors read and approved the final article.

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