Reviewer’s report

Title: Imported loiasis in France: a retrospective analysis of 167 cases with comparison between sub-Saharan and non sub-Saharan African patients.

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Reviewer: Federico Gobbi

Reviewer's report:

The authors report a case series of patients with imported loiasis diagnosed in Paris District (France) between 1993 and 2013. The main weaknesses of this manuscript relate the inclusion criteria of the patients with loiasis and the criteria to classify the efficacy of the different treatment regimens. In fact, the home made serology that the authors used is not validated and the only serological test specific for loiasis is a rapid test (Pedram B, Pasquetto V, Drame PM, Ji Y, Gonzalez-Moa MJ, Baldwin RK, Nutman TB, Biamonte MA. A novel rapid test for detecting antibody responses to Loa loa infections. PLoS Negl Trop Dis. 2017 Jul 27;11(7):e0005741). Moreover, it is true that in the literature there are no official criteria neither to standardize the follow up of the patients with loiasis nor to detect the cure rate after the treatment, but in this manuscript the criteria should be better specified.

page 1, line 1-2: loiasis is present only in central and west Africa, so it would be better to classify the patients from endemic or non endemic countries, in the title and in the whole article

page 2, line 27: if loiasis has become a rare cause, the authors should specify if before it wasn't a rare cause

page 2 line 28: please specify the areas of tropical Africa

page 2, line 32: in the methods it would be better to specify if the diagnosis of loiasis was made by detection of eyeworm, microfilariae or occult loiasis

page 2, line 39-40: it is very strange that the serology resulted positive only in 53% of the patients, while the microfilaraemia was present in the 63% of the patients. it would be logical to expect serology to be positive in cases with positive microfilaraemia and in a large part of those without microfilaraemia

page 2, line 43: it would be better to define the cure rate

page 3, line 49: please specify the part of Africa (west and central Africa)

page 3, line 57: it would be better to report the references 6-14 chronologically

page 4 , line 74-76: the meaning of the sentence is not clear

page 4, line 76-78: the authors state that they did not include patients who did not fit with epidemiological presentation, but they included patients from Ivory Coast, Mali and Rwanda, countries where Chryrops are not present (countries not considered endemic for loiasis). It would be very interesting to know if these patients were diagnosed with serology or with positive microfilaraemia.
also this sentence is not clear

why subcutaneous oedemas with different locations were not considered Calabar swelling? Please, specify.

please, specify the technique used to detect microfilariae

the home made serology is not validated, so we are not sure that the patients with positive serology are true or probable cases of loiasis

the authors cite that evaluation of the sensitivity of serology has been done, but these data are missing.

ivermectin alone is not a recognized treatment for loiasis, due to the microfilaricidal effect only of this drug (see ref 27: Boussinesq. Loiasis: new epidemiologic insights and proposed treatment strategy. J Travel Med 2012; 19:140-3.)

the authors should describe better the features of the follow up. Moreover, the criteria to define cure or failure of the treatment are vague.

if this parameter is available only in nine patients, it would be better to omit it.

please correct ] instead [

pruritus is present in patients with loiasis, but it is also present in other filariasis (such as Mansonella perstans infection), so we can't consider it as a specific symptom

the meaning of the sentence is not well understood

this sentence is very confusing and refers to non-validated serology

the authors state that the outcome was present in 165/167 patients, but in the table 4 they reported 44 patients treated with ivermectin lost to follow up. Please specify this discrepancy

considering that in the methods cure and failure definitions are not clear, consequently the outcome is debatable

it would be better to specify how many patients were treated with 1, 2, 3, 4, 5 or 6 courses of ivermectin

the authors report that 4 out of 10 people treated with one course of ivermectin received also albendazole. Then the patients were not treated with ivermectin alone. Moreover, albendazole has a macrofilaricidal effect (Klion AD, Horton J, Nutman TB. Albendazole therapy for loiasis refractory to diethylcarbamazine treatment. Clin Infect Dis. 1999 Sep;29(3):680-2.) so the cure presumably resulted from the combination of the 2 drugs

without specific criteria to define cure and failure, this manuscript cannot contribute to assess the response to treatment
if the patients coming from non endemic countries (Mali, Cote d'Ivoire, Rwanda) were real cases of loiasis, this discovery would deserve a publication in itself, but to do so the authors should demonstrate the presence of the adult worm or microfilariae and be 100% sure that these patients never stayed in endemic countries

the authors cannot demonstrate a mean incubation time, based on data from 9 patients

the other symptoms may be due to co-infections

it is very difficult to differentiate between Calabar swelling and migratory oedemas

the patients described by the authors have a mean microfilaremia of 2586 and 1247, while the severe adverse effects of Dec and ivermectin were reported in patients with higher microfilaremia

albendazole probably has a macrofilaricidal effect

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

No

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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