

In Response

A Call for More Case-Controlled Studies on Onchocerciasis and Epilepsy

Dear Sir:

We thank Pion and Boussinesq¹ for the initiative to reanalyze the data of their study from an onchocerciasis endemic area in Central Cameroon that, in part, had been published in 2002.² Their finding of a significant association between epilepsy and the presence of subcutaneous nodules corresponds well with our own results obtained in a similar setting in West Uganda.³

As a difference to many studies searching for a relationship between onchocerciasis and epilepsy, the study by Pion and Boussinesq¹ and our study³ used clear pair-matched design controlling for time and intensity of exposure to *Onchocerca volvulus*. To test the robustness of our results, the association between epilepsy and onchocercal nodules should be investigated in other endemic areas with adequate methods. Investigations of this kind would require simple and non-invasive procedures: appropriate sampling of cases and controls and history-taking for the confirmation of epilepsy and nodule palpation. Some data on the issue may even have been assessed in earlier studies but were not fully analyzed or communicated. For instance, in a well-designed study conducted in the Central African Republic,⁴ the skin of patients with epilepsy and matched controls were examined for microfilaria of *O. volvulus* by skin biopsy and onchocercal nodules by palpation. Unfortunately, in this publication, the number of subcutaneous nodules was communicated only for the complete sample but not separately for patients and controls.⁴ In view of the intriguing consistency between the above-mentioned investigations from Cameroon² and Uganda,³ it would be of interest to know the exact result of nodule palpations carried out in the Central African Republic by Druet-Cabanac and others.⁴

In our article about the Itwara focus,³ we wanted to illustrate some of the methodological problems of controlled studies of the link between onchocerciasis and epilepsy, and we wanted to call on other researchers to get involved. More rigorous case-controlled studies are needed on this neglected issue.

CHRISTOPH KAISER

TOM RUBAALE

JOA OKECH OJONY

GEORGE ASABA

Basic Health Services Kabarole and Bundibugyo Districts
Fort Portal, Uganda

E-mails: drchkaiser@web.de, communitybased@utonline.co.ug,
joaokech@hotmail.com, asaba_george@yahoo.com

EPHRAIM TUKESIGA

Vector Control Unit
Ministry of Health
Fort Portal, Uganda

E-mail: etukesiga@yahoo.com

WALTER KIPP

Department of Public Health Sciences
University of Alberta
13-103 Clinical Sciences Building
Edmonton, Alberta T6G 2G3, Canada
E-mail: walter.kipp@ualberta.ca

GEOFFREY KABAGAMBE

Makarere School of Public Health
Kampala, Uganda

E-mail: drkabagambe@yahoo.com

REFERENCES

1. Pion SDS, Boussinesq M, 2012. Significant association between epilepsy and presence of onchocercal nodules: case-control study in Cameroon. *Am J Trop Med Hyg* 86: 557.
2. Boussinesq M, Pion SD, Demanga-Ngangue, Kamgno J, 2002. Relationship between onchocerciasis and epilepsy: a matched case-control study in the Mbam Valley, Republic of Cameroon. *Trans R Soc Trop Med Hyg* 96: 537–541.
3. Kaiser C, Rubaale T, Tukesiga E, Kipp W, Kabagambe G, Ojony JO, Asaba G, 2011. Association between onchocerciasis and epilepsy in the Itwara hyperendemic focus, west Uganda: controlling for time and intensity of exposure. *Am J Trop Med Hyg* 85: 225–228.
4. Druet-Cabanac M, Preux PM, Bouteille B, Bernet-Bernady P, Dunand J, Hopkins A, Yaya G, Tabo A, Sartoris C, Macharia W, Dumas M, 1999. Onchocerciasis and epilepsy: a matched case-control study in the Central African Republic. *Am J Epidemiol* 149: 565–570.