

Importance of Ophthalmological Examination In The Face of Suspicion of Neurocysticercosis

Rajaona Ranto Andriatsilavina^{1*}, Rasolonjatovo Emilson², Rafanomezantsoa Rindra¹, Miray Louis De Gonzague¹, Razafimahefa Julien³, Raobela Lea¹

¹Department of Ophthalmology HJRA Hospital, University of Antananarivo Madagascar

²Department of Neurosurgery, HJRA Hospital, University of Antananarivo, Madagascar

³Department of Neurology, Befelatanana Hospital, University of Antananarivo, Madagascar

Received: 26 September, 2016; Accepted: 15 October, 2016; Published: 25 October, 2016

*Corresponding author: Ranto Andriatsilavina Rajaona, Department of Ophthalmology HJRA Hospital, University of Antananarivo Madagascar, Tel no: 00261331103381 ; E-mail: drrajaona@gmail.com

Abstract

Introduction: Cysticercosis is a parasitosis due to the development of cysticercus larva in various tissues of organism. This infection constitutes a chief problem of public health in developing countries like Madagascar.

The purpose of the study is to report one case of neuroocular cysticercosis and to emphasize the importance ophthalmological examination if neurocysticercosis is suspected.

Observation: We report the case of 20 years old man at whom a translucent cystic lesion animated with peristaltic movement was discovered during the funduscopic examination that permitted to diagnose a neurocysticercosis.

Discussion: In the discussion, we will stress the importance of ophthalmological examination in the face of all suspicion of neurocysticercosis.

Conclusion: All in all, in view of the high prevalence of this disease in Madagascar, ophthalmological consultation is of paramount importance.

Keywords: Ocular cysticercosis ; Ophthalmological examination; Ocular prevalence

Introduction

Cysticercosis is humans infection by larval form of *Taenia solium*. This disease constitutes a chief problem of public health in developing countries where hygiene is poor. Otherwise, neurocysticercosis is an emerging disease in developed countries, due to increased immigration from endemic areas, mainly in Latin America. Cysticercosis affects an estimated 50 million people worldwide [1]. Madagascar, with around 10% of prevalence is among the most touched nations by this infection. Cysticercosis can infest any organs, especially central nervous system, whereas ophthalmological involvement is rare [3]. We report a case of intraocular cysticercosis that led to a diagnosis of neurocysticercosis.

Observation

We report a case of 28 years old man, medical student, who came to the consultation for progressive painless vision loss from left eyes which began since about one month prior to eye check. Concerning his past history, he does not have any medico-surgical particular issues, apart from a habit of eating raw porcsausages during his childhood. The story had started two months before he went to ophthalmological consultation. He had had unusual temporal cephalgia associated with a painful left eye for several days. Therefore, he went to a general practitioner who prescribed him a stage 2 analgesic that slightly relieved the symptoms. He carried out first ophthalmological consultation with a liberal ophthalmologist who prescribed glasses thinking that headaches were due to ametropia, visual acuity was normal in both eyes, examination of the fundus was not performed. Then, the appearance of Bravais Jacksonian type epileptic seizures combined with absence were the causes of his admission to neurology service. The brain CT scan was normal [Figure 1]. Biological examination showed a normal CRP lower than 5Mg/l, the hematocrit at 50,5%. The hemogram found out an hypereosinophilia at 3 Giga per liter, both CRL (Cerebrospinal Liquid) analysis and cysticercosis serology are normal. Consequently, the diagnosis couldn't be discovered, he was given laroxyl as treatment and discharged from hospital. The neurological symptoms disappeared. But after getting out of hospital, his vision began to decrease rapidly pushing him to go to ophthalmological consultation in hospital again ten days later.

The ocular exam in left eye showed: visual acuity was hand movement. The anterior segment was normal, particularly, anterior uveitis, pupillary reflexes were positives, IOP is 14mmHg. In funduscopic examination, however, there was an hyalitis estimated to 3 crosses with a spheric translucent cystic formation. This is a whitish stain animated by a peristaltic movement when triggered by light. Right eye exam was normal. The cysticercosis was finally diagnosed.

Cysticercosis is a larval cestodose due to the growth in the

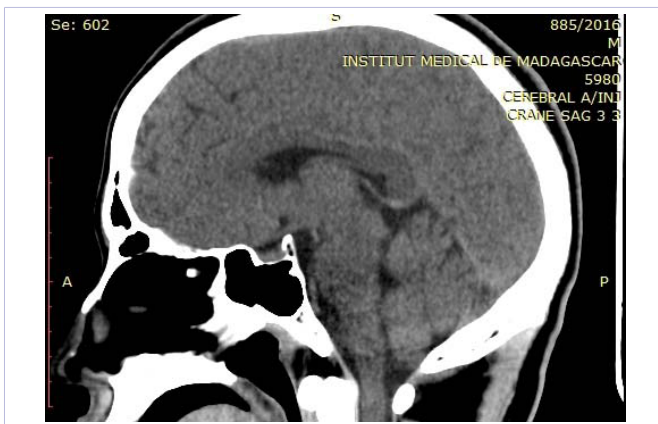


Figure 1

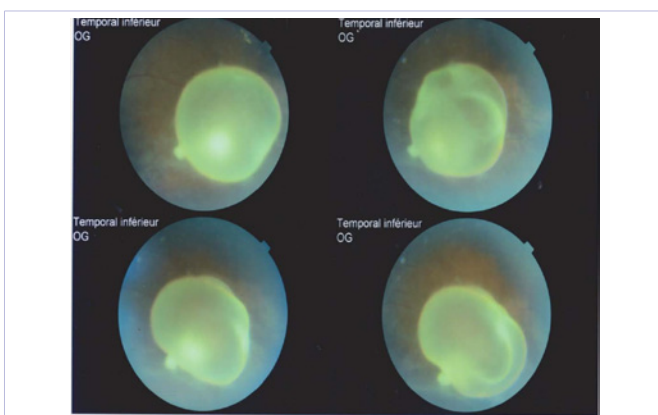


Figure 2

humans the *tænia solium* larva [1]. This is a strict small intestine parasitic of humans (definitive hosts). Nevertheless, humans might accidentally become intermediate hosts of *T solium*; these larva can determine, according to their localisations, a cysticercosis in the following sites: cerebral, cutaneo-muscular, ocular [4]. Madagascar belongs to the very high endemicity regions with prevalence rate which vary from 7 to 21% according to the regions [2].

Cysticercosis affects especially the central nervous system with prevalence from 60 to 90% [1] of cases. By contrast, ocular localization is rare, in about 5% of cases, whose 90% located in posterior segment (vitreous, subretinal) [5].

Clinical diagnosis of neurocysticercose is based on a lot of beams of argument such as (faecal peril, promiscuity humans pigs, measily meat consumption), clinical (convulsion), biological (blood hypereosinophilia), tomodensitometrical (parenchymatous form). Immunology and anatomopathology are needed for biological diagnosis [1]. In our case, immunological blood examination, CRL as well as cerebral imaging couldn't manage to confirm the diagnosis. However, the ophthalmological symptoms that occurred secondarily led to a certain diagnosis in which intravitreal cyst was seen. Actually the ophthalmological (fundus) examination only permit to unveil the diagnosis in presence of intravitreal or subretinal mobile translucent cyst [1].

Conclusion

Neurocysticercosis is the most serious emerging and reemerging disease. This parasitosis is responsible for 50.000 death every year according to WHO [6]. It is one of the most frequent causes of epilepsy in developing countries, unfortunately, it is not always easy to diagnose due to the shortage of technical equipment.

Hence, ophthalmological consultation especially fundus examination is of paramount importance if cysticercosis is suspected in an endemic area. Otherwise, it's important to suspect when the symptoms are compatible in a patient from an endemic area.

References

1. Aubry P, Bequet D, Queguiner P. Cysticercosis: a frequent and redoubtable parasitic disease. *Med Trop (Mars)*. 1995;55(1):79-87.
2. Andriantsimahavandy A, Ravaolimalala VE, Rajaonarisoa P, Ravoniarimbina P, Rakotondrazaka M, Raharilaza N, et al. The current epidemiological situation of cysticercosis in Madagascar. *Arch Inst Pasteur Madagascar*. 2003;69(1-2):46-51.
3. Bernardin Prisca, Auzemzry A, Rabenatoandro C. Ocular cysticercosis (O.C.) in Madagascar. *Rev Int Trach Pathol Ocul Trop Subtrop Sante Publique*. 1994; 71:103-113.
4. Bronstein JA, Klotz F. Cestodoses larvaires. *EMC-Maladies Infectieuses*. 2005;2(2):59-83. doi : 10.1016/j.emcmi.2004.11.002.
5. Auzemery A, Andriantsimahavandy a, Bernardin P, Queguiner P. Cysticercose intra-vitréenne, evolution spontanée, à propos d'un cas. *J Fr Ophthalmol*. 1996;19: 556-558.
6. Roman G, Sotelo J, Del Brutto O, Flisser A, Dumas M, Wadia N, et al. A proposal to declare neurocysticercosis an international reportable disease. *Bulletin of the World Health Organization*. 2000;78(3):399-406.