

## Case report

### Severe ocular sequelae of congenital toxoplasmosis: huge macular scar

Fadoua Zahir<sup>1&</sup>, Meriem Abdellaoui<sup>1</sup>, Samar Younes<sup>1</sup>, Idriss A Benatiya<sup>1</sup>, Hicham Tahri<sup>1</sup>

<sup>1</sup>Ophthalmology Service, CHU Hassan II, Fes, Morocco

<sup>&</sup>Corresponding author: Fadoua Zahir, Ophthalmology Service, CHU Hassan II, Fes, Morocco

Key words: Congenital toxoplasmosis, retinochoroiditis, sequelae

Received: 19/07/2014 - Accepted: 31/12/2014 - Published: 12/03/2015

#### Abstract

Retinochoroiditis is the most common ocular manifestation of congenital toxoplasmosis, but other associated ophthalmological pathologies can also occur. Ophthalmologists are rarely able to distinguish between toxoplasmic retinochoroiditis due to infection acquired before or after birth, unless other clinical or serological indications are present. This article reports a case of a 3-year-old boy with abnormalities suggestive of congenital toxoplasmosis. The clinical and complementary examinations are discussed. The education of pregnant women is crucial for the prevention of congenital toxoplasmosis. Awareness of antenatal and postnatal presenting signs and symptoms is important for clinicians, because early diagnosis and treatment may minimize sequelae. Untreated, the majority of affected infants will develop chorioretinitis, deafness and/or neurological symptoms.

**Pan African Medical Journal. 2015; 20:233 doi:10.11604/pamj.2015.20.233.5097**

This article is available online at: <http://www.panafrican-med-journal.com/content/article/20/233/full/>

© Fadoua Zahir et al. The Pan African Medical Journal - ISSN 1937-8688. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

## Introduction

---

Retinchoroiditis is the most common ocular manifestation of congenital toxoplasmosis, but other associated ophthalmological pathologies can also occur [1]. Ophthalmologists are rarely able to distinguish between toxoplasmic retinchoroiditis due to infection acquired before or after birth, unless other clinical or serological indications are present [2]. Awareness of antenatal and postnatal presenting signs and symptoms is important for clinicians, because early diagnosis and treatment may minimize sequelae [3].

## Patient and observation

---

A 3 year-old boy of a not followed pregnancy presented with an 8 months history of exotropia of the left eye (**Figure 1**). Cycloplegic refraction was -0.25 and 0.00 in the right and left eyes respectively.

An initial objective assessment of the visual function showed a best corrected visual acuity of 12/10 in the right eye and Counting fingers at 1m in the left eye. Examination of the anterior segment was unremarkable in both eyes. Fundoscopy revealed macular scar of about 3 papillary diameters (**Figure 2**).

The optical coherence tomography (OCT) of the macula reveals a disorganization of retinal architecture related to a sequelae of Retinchoroiditis at the left eye (**Figure 3**). General examination was unremarkable including the neurological examination. Although we have no serological evidence of congenital infection, we conclude to the diagnosis of macular sequelae secondary to congenital toxoplasmosis based on the following arguments: the presence of a toxoplasmic retinchoroiditis, no acute ocular symptoms, a history of squint in affected eye and a notion of untreated febrile episode during the pregnancy.

## Discussion

---

Retinchoroiditis is the most common ocular manifestation of congenital toxoplasmosis [1]. The other clinical manifestations of congenital ocular toxoplasmosis were choroidal coloboma, strabismus, nystagmus, ptosis, microphthalmia, cataract and enophthalmia [4]. Epidemiological evidence suggests that most adult disease arises from infection acquired after birth [5]. Much less is known about the prevalence of infection before and after birth in children with toxoplasmic retinchoroiditis. Ophthalmologists are rarely able to distinguish between toxoplasmic retinchoroiditis due to infection acquired before or after birth, unless other clinical or serological indications are present [2].

Knowledge of the relative contribution and severity of infection acquired before and after birth to symptomatic ocular toxoplasmosis in children would inform counselling and the public debate on the relevance of screening programmes for children [6].

Retinchoroidal lesions due to infection before and after birth were indistinguishable. The presence of bilateral, multiple or posterior pole lesions did not distinguish between the two groups, but most children (84%) presenting with acute ocular symptoms had postnatally acquired infection. Children infected before birth were most likely to be detected through abnormal vision screening or ocular appearance. Children infected after birth all presented with acute ocular symptoms. The site of lesion was similar, regardless of when infection occurred [2].

## Conclusion

---

Retinchoroiditis is the most common ocular manifestation of congenital toxoplasmosis [1]. The education of pregnant women is crucial for the prevention of congenital toxoplasmosis. Untreated, the majority of affected infants will develop chorioretinitis, deafness and/or neurological symptoms [3].

## Competing interests

---

The authors declare no competing interest.

## Authors' contributions

---

All authors contributed to the work and write-up of the manuscript. All authors read and agreed to the final version of this manuscript and equally contributed to its content and to the management of the case.

## Figures

---

**Figure 1:** exotropia for the left eye

**Figure 2:** macular scar of about 3 papillary diameters

**Figure 3:** optical coherence tomography (OCT) of the macula reveals a disorganization of retinal architecture related to a sequelae of retinchoroiditis

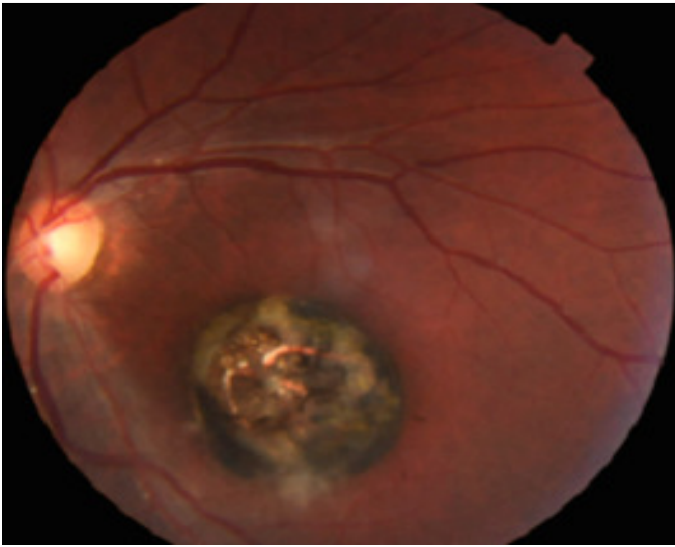
## References

---

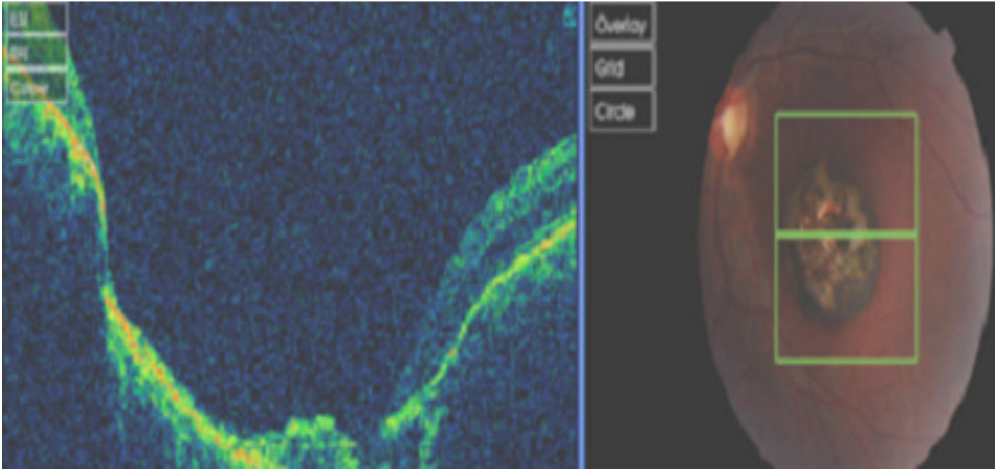
1. Suhardjo, Utomo PT. Clinical manifestations of ocular toxoplasmosis in Yogyakarta, Indonesia: a clinical review of 173 cases. *Southeast Asian J Top Med Public Health*. 2003; 34(2):291-7. **PubMed | Google Scholar**
2. Stanford MR, Tan HK. Toxoplasmic retinchoroiditis presenting in childhood: clinical findings in a UK survey. *Br J Ophthalmol*. 2006 December; 90(12):1464–1467. **PubMed | Google Scholar**
3. Hoekstra F, Buzing C. Congenital toxoplasmosis: severe ocular and neurological complications. *Ned Tijdschr Geneesk*. 2011; 155(18):A2853. **PubMed | Google Scholar**
4. Kodjikian L, Wallon M. Ocular manifestations in congenital toxoplasmosis. *Graefes Arch Clin Exp Ophthalmol*. 2006 Jan; 244(1):14-21. **PubMed | Google Scholar**
5. Gilbert R E, Stanford M R. Is ocular toxoplasmosis due to prenatal or postnatal infection. *Br J Ophthalmol*. 2000; 84(2):224–226. **PubMed | Google Scholar**
6. OConnor GR. Manifestations and management of ocular toxoplasmosis. *Bull N Y Acad Med*. Feb 1974; 50(2):192–210. **PubMed | Google Scholar**



**Figure 1:** exotropia for the left eye



**Figure 2:** macular scar of about 3 papillary diameters



**Figure 3:** optical coherence tomography (OCT) of the macula reveals a disorganization of retinal architecture related to a sequelae of retinochoroiditis