Ocular Toxocariasis in a Preschool Patient

Franciolly Roberto Pires[1], Rafael de Oliveira Sousa[2], Leandro Cesar Cotta[3], Douglas Henrique Teixeira[4], Tiago Maia Justiniano Ribeiro[5]: 1-2-3-4. Intern physicians in the internship program of ophthalmology at Visão Hospital de Olhos, Brasília – Federal District. 5. Ophthalmologist, responsible for the Department of Pediatric Ophthalmology and Strabismus and for the Fellow in Pediatric Ophthalmology and Strabismus at Visão Hospital de Olhos, Brasília – Federal District.

INTRODUCTION

This work aims to report a case of ocular toxocariasis in a preschool patient with granuloma formation in the posterior pole of the retina, highlighting its epidemiology, diagnosis and therapeutic approach.

CASE REPORT

Female patient, 3 years old, born in Bahia and from Gama-Distrito Federal (DF). Attended at the Pediatric Ophthalmology Department of a private service in Brasília-DF, in August 2020, to evaluate suspected strabismus.

No previous comorbidities or family history of eye diseases. Uncorrected visual acuity: right eye (RE) fixed and follows; left eye (LE) does not fix and does not follow. Biomicroscopy showed a hardened tumor in the temporal orbital margin of the RE, not mobile; cleft asymmetry (closer in LE); LE exotropia with V and left inferior oblique muscle hyperfunction; LE enophthalmos; without other changes. Tonometry of 11 mmHg in both eyes (BE).

She was referred to the Department of Retina, retinal mapping and color retinography were performed, a chorioretinitis sequelae was detected in the LE, probable ocular toxocariasis. Ocular ultrasonography was performed, compatible with normality in BE.

She was referred to the Department of Oculoplastics, requested tomography of the orbits without contrast, finding a small cyst in the lateral portion of the right orbit, with the appearance of a dermoid/epidermoid cyst measuring 1.2x0.7 cm. Exeresis of the tumor in the right superolateral orbital rim was indicated. Surgery performed uneventfully. Anatomopathological result of an epidermal infundibular cyst.

The patient is under outpatient follow-up, with diagnoses of myopic astigmatism in the BE, chorioretinitis scar in the LE (possible toxocariasis sequelae) and exotropia of the LE. She is currently using protective goggles for RE, with polycarbonate lenses, and is undergoing conservative treatment.

Figure 1. Colored retinography of the RE, within normal limits.

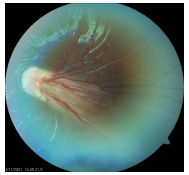

Figure 2. Colored retinography of the LE, with an atrophic focus (healed) of nasal chorioretinitis at papilla.

DISCUSSION

Usually, ocular toxocariasis is more common in older children and young adults; however, in the present study, it occurred in a 3-year-old child[3]. In the series presented by Morais et al, the age at onset of ocular findings of toxocariasis ranged between 2 and 17 years, with a mean of 7.9 years. In the present study, bilaterality was not observed, which is consistent with the literature[1,2,9].

In the case presented, serology for Toxocara canis was not performed, the diagnosis was clinical-epidemiological and imaging. Laboratory tests have limited use in ocular toxocariasis. Although patients with visceral larva migrans often present with leukocytosis with eosinophilia, this finding does not occur in the ocular form. Prevalence of seropositivity in pediatric populations ranges from 20 to 30%[4,5].

In combination with the history, clinical examination and serology, ultrasonography can help in the diagnosis of ocular toxocariasis, especially in cases with media opacity[7]. Ocular ultrasonography was performed in this patient, whose examination was compatible with normality in BE. Based on the literature, the most consistent sonographic finding in the eye with toxocariasis is the presence of a highly reflective retinal mass, located at the posterior pole or periphery, which can be calcified[7,8].

Biomicroscopy showed XT of LE with V and the parents reported that their daughter had contact with pets. In the studies by Morais et al, regarding the clinical and epidemiological findings, strabismus was present in 5 (45.5%) cases.

The three main forms of presentation of ocular toxocariasis are posterior pole granulomas, peripheral granuloma and chronic endophthalmitis[10]

Conservative treatment was chosen in this case. Clinical treatment is based on the use of oral corticosteroids, or through injections of periocular corticosteroids if the lesion is peripheral. Although anthelmintic agents do not have the ability to penetrate the eye, some authors advocate their use, always associated with corticoids. Surgical treatment is based on photocoagulation, in cases of posterior granuloma, and vitrectomy in cases of rhegmatogenous or tractional retinal detachment, as well as vitreous opacities[6].

REFERENCES

1. Santarém, V.A., *et al.* Toxocaríase canina e humana. *Veterinária e Zootecnia*. v. 16, n. 3, p. 437-447, 2009.
2. Carvalho, E.A.; Rocha, R.L. Toxocaríase: larva migrans visceral em crianças e adolescentes. Jornal de Pediatria. v. 82, n. 2, p. 100-110. 2011.
3. Wilkinson, C.P.; Welch, R.B. Intraocular toxocara. *American Jounal of Ophthalmology*. v. 71, n. 4, p. 921-30,1971
4. KANSKI, J. J.; BOWLING, B. Oftalmologia Clínica. 8. ed. Rio de Janeiro: Guanabara Koogan Ltda, 2020.
5. Lescano, S.Z., *et al.* Antihelmínticos na toxocaríase experimental: efeito na recuperação de larvas de *Toxocara canis* e na resposta humoral. *Jornal Brasileiro de Patologia e Medicina Laboratorial*. v. 41, n. 1, p. 21-24, 2005.
6. Moreira Jr., Carlos A., *et al.* Vitrectomia pars plana para tratamento de complicações de toxocaríase ocular: relato de 6 casos. *Arquivos Brasileiros de Oftalmologia*. v. 58, n. 3, p. 161-167, 1995.
7. Morais, Fábio Barreto, *et al.* Achados ultrassonográficos em toxocaríase ocular. *Arquivos Brasileiros de Oftalmologia*. v. 75, n. 1, p. 43-47, 2012.
8. Kohler, Liza Ingride Acha, *et al.* Acometimento visceral e ocular simultâneo em infecção por toxocara canis acompanhado de farmacodermia. *Revista da Sociedade Brasileira de Clínica Médica*. v. 15, n. 2. p. 112-115, 2017.
9. Oréfice, F.; Boratto, L.M.; Silva, H.F. Presumível toxocaríase ocular - revisão de 30 casos (1978-1989) – relato de dois casos atípicos. *Revista Brasileira Oftalmologia*. v. 50, n. 2, p. 31-37, 1991.
10. Lacerda, R.R. Toxocaríase de 36 casos: estudo sequencial. *Revista Brasileira Oftalmologia*. v. 54, n. 3, p. 720, 1995.