OCULAR TOXOCARIASIS. A CASE REPORT

ABSTRACT

Case report: We present the case of a seven-year-old male with ocular toxocariasis. The fundus of the eye showed a vitritis, as a result of which the retina could not be seen. Following treatment with systemic corticosteroids the condition evolved favorably. However, due to a papillary and peripheral granuloma that raised the macula, a vitrectomy was performed which stabilized the process.

Discussion: Ocular toxocariasis is not common in developed countries. The diagnosis is based on funduscopic aspects, serology and IgG positivity of the vitreous. In relation to treatment, as the use of anthelminthics therapy is controversial, the use of corticosteroids and vitrectomy is recommended (Arch Soc Esp Oftalmol 2007; 83: 49-52).

Key words: Toxocariasis, granuloma, vitrectomy, corticosteroids, anthelmintics, macula.

INTRODUCTION

Toxocariasis is the infection in humans due to Toxocara canis and exceptionally by Toxocara catis. These nematodes develop the adult stage in the intestines of cats and dogs, where each female produces 200,000 eggs per day which are eliminated from the body and become infecting after 2-5 weeks. After being ingested by humans, the larvae go through the intestinal wall, migrating via the veins into the liver and the rest of the body, where they remain as larvae (1). Clinically, two syndromes are described: Visceral Larva Migrans (VLM) and Ocular Larva Migrans (TO) which, although pre-
sent as independent pathologies, are able to co-exist (2). The VLM is the result of the migration of the parasites through different tissues, producing an intense inflammatory response. The TO is expressed with signs and symptoms topographically located in the eyes. It is considered to be the result of a very few larvae and sometimes only one which is able to invade almost all the ocular structures. The most common ocular lesions are posterior pole granuloma, peripheral granuloma or a condition similar to chronic endophthalmitis.

In the bibliographical review we have found very few cases described in our country (3).

**CASE REPORT**

This case describes the presentation, evolution and treatment of a child with ocular toxocariasis. A 7 year-old boy who visited the practice due to loss of vision in the left eye (LE) starting two months earlier and echographic diagnostic of retinal detachment (fig. 1). Medical history not relevant and amblyopia in the same eye with occlusive treatment.

A complete ophthalmological study was carried out: visual acuity (VA), biomicroscopy, tonometry, eye fundus, ecography (ECO), fluorescein angiography (AFG), study of samples for PCR and enzyme immune analysis (ELISA).

The VA was of 1 in RE and hand movements in LE.

Biomicroscopy and ocular pressure were normal. The eye fundus exhibited a large vitritis which made it difficult to assess the retina, showing a papillary granuloma with raising of the macula (fig. 2).

A differential diagnostic was considered with pars planitis, toxoplasmosis, toxocariasis and retinoblastoma. A general study was initiated, including chest x-rays, hemogram, liver tests, proteinogram and lues serology, toxoplasma and toxocara by means of ELISA. It was decided to establish treatment with a general corticoid (1 mg/kg/day). The ELISA was positive for toxocara and negative for toxoplasmosis, establishing a diagnostic of ocular toxocariasis in the form of posterior pole granuloma. Once diagnosed, the patient admitted having contact with a puppy in a local park. A defecation study was carried out to identify parasites, discarding the presence of Larva Migrans at other levels. In addition, an ocular ECO was performed (which was reported as normal) in order to discard calcifications. Analyses were requested, which identified hypergammaglobulinemia and absence of eosinophilia. The same treatment was maintained (fig. 3). One month later, VA was of 0.1 and vitritis had disappeared, but the traction over the macula and the peripheral granuloma remained. Accordingly, it was decided to carry out a virectomy. The macular attraction was released together with the granulomae and a vitreous sample was taken under air, with PCR and ELISA positive for Toxocara cani. The histological sample discarded neoplastic cells. The VA improved to 0.3 although the activity in the FAG persisted (fig. 4). The treatment was...
maintained for two weeks, obtaining a VA of 0.5 (fig. 5). The follow-up was continued for ten months, during which the patient had two small out-breaks of anterior inflammation and one posterior inflammation which were treated with general corticoids. The VA remained at 0.5.

DISCUSSION

The prevalence of Toxocariasis is greater in tropical and subtropical climates (65%). In developed countries, it ranges between 2-10% (1).

We do not know the current prevalence in our country (the most recent studies are dated 10 years ago (4,5) but in a case like the one presented here the possible diagnostics described above must be considered. In this case, malformation processes were discarded because the previous ocular explorations gave normal results. In turn, retinoblastoma was discarded due to the ECO and the histological study, while toxoplasmosis was also discarded with a negative ELISA. A positive ELISA for toxocara in serum does not come from the disease and it could be a false positive due to another nematode; in addition, it must be considered that serum prevalence is very high. Eosinophilia could be caused by another nematode and/or be absent. A positive ELISA in ocular humors together with the ophthalmos-copic aspect would assist in confirming the diagnostic. In what concerns the treatment, considering the good response to corticoids and the controversy about the use of anti-helmintics it was decided not to utilize them for the time being. However, if the inflammatory breakouts persisted, other possibilities would have to be considered.

REFERENCES

