Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/18501
DOI URL: http://dx.doi.org/10.21474/IJAR01/18501

RESEARCH ARTICLE

OCULAR TOXOCARIASIS IN AN ADULT PATIENT

El Akkoumi Abdelkader, Lazaar Hamza, Edderaz Imane, Meryem Sefrioui, Taha Boutaj Saad Benchekroun, Samira Tachfouti and Cherkaoui Lalla Ouafa

Manuscript Info

Manuscript History
Received: 30 January 2024
Final Accepted: 29 February 2024
Published: March 2024

Abstract

Toxocariasis, a parasitic infection caused by the nematode parasite Toxocara, is prevalent worldwide, primarily transmitted to humans through contaminated feces of dogs and cats. While ocular involvement is rare, it mainly affects children. Here, we present a case report of a 38-year-old adult residing in a rural area with prior exposure to cats and dogs, who presented with progressive unilateral visual impairment, esotropia, and a painless white eye. Ophthalmological examination revealed retinal folds and fibrous bands extending from the optic disc to the periphery, indicative of vitreoretinal traction. Laboratory findings showed hypochromic microcytic anemia with hypereosinophilia and strongly positive antibody titers against Toxocara cati in both vitreous and serum. Treatment consisted of Albendazole (800 mg/day) and oral corticosteroids (1 mg/kg/day) with gradual tapering over one month, resulting in significant improvement after three months. This case highlights the importance of considering toxocariasis in adults with ocular symptoms and emphasizes the efficacy of combined antiparasitic and anti-inflammatory therapy in managing ocular toxocariasis.

Introduction:-

Toxocariasis is a common parasitic infection worldwide. Toxocara is a nematode parasite caused by infestation of the parasite Toxocara Canis (dogs) and less commonly Toxocara cati (cats) larvae. The ova of Toxocara are transmitted to humans through the contaminated feces of dogs and cats.

Ocular involvement of toxocariasis is rare and mostly occurs in children. We report a case of an adult patient presenting with toxocariasis due to Toxocara cati.

Case Report:

We report the case of a 38-year-old patient with no significant medical history,resident in a rural area with a history of contact with cats and dogs, who presented with progressive unilateral visual acuity loss in the right eye with esotropia and a painless white eye. Examination of the right eye revealed visual acuity of 10/10. Examination of the left eye revealed divergent strabismus, clear cornea, well-depth anterior chamber, no Tyndall effect, and no synechiae. Fundus examination showed a fibrous band with retinal folds extending from the optic disc to the periphery, responsible for vitreoretinal traction (figure 1)

Laboratory investigations showed hypochromic microcytic anemia with hypereosinophilia (12%, normal value: 7-10%), and an unremarkable tuberculin skin test.

Corresponding Author:- El Akkoumi Abdelkader

Antibody titers against T. cati were strongly positive in both vitreous and serum (ELISA), which was confirmed by Western Blot.

Le reste du bilan: ECA, serologie toxoplasmose werenegative. The thoracic CT scan was normal.

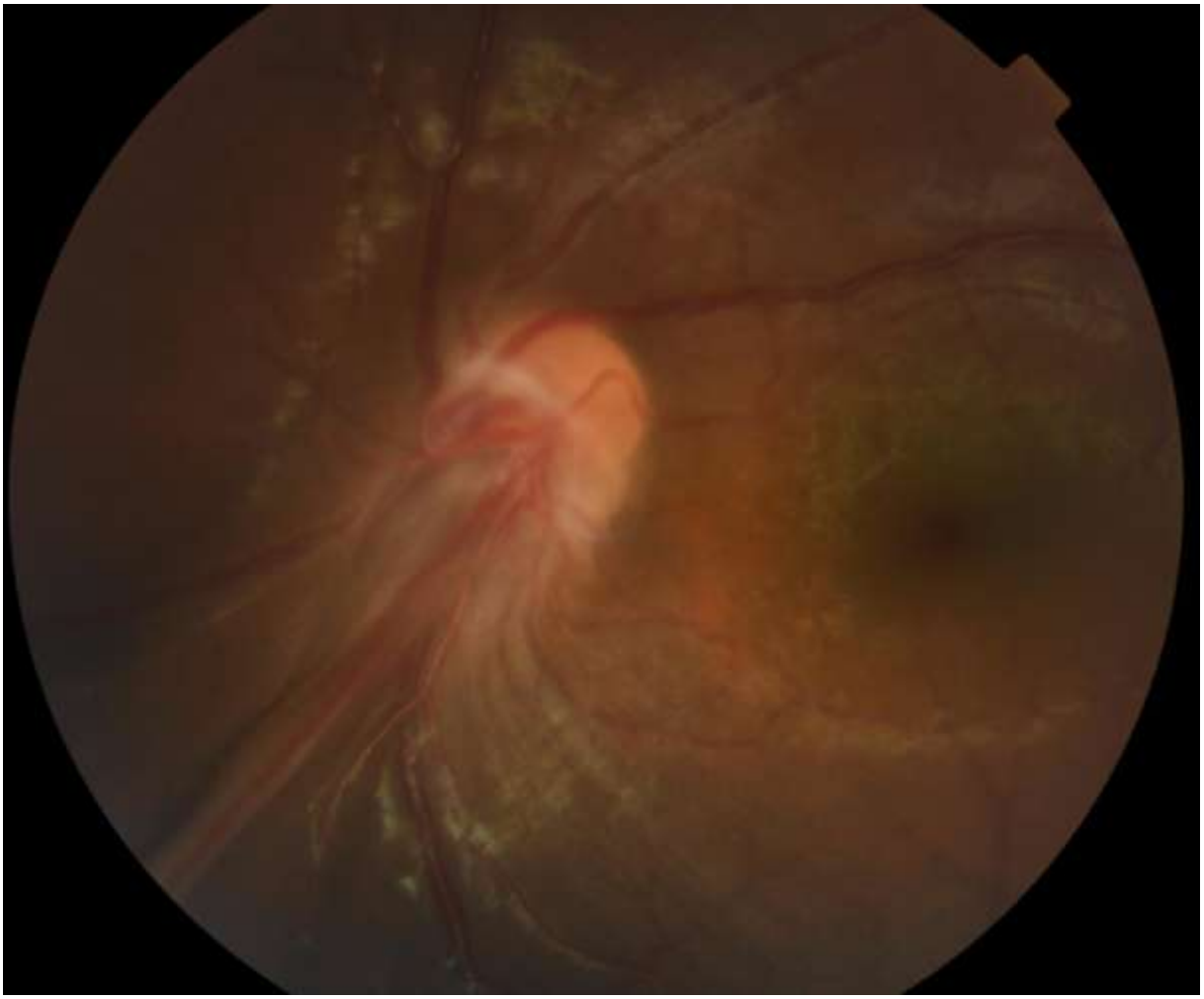

Figure 1:- Photograph of the fundus showing a fibrous band with retinal folds extending from the optic disc to the retinal periphery, responsible for vitreoretinal traction.

The patient was treated with Albendazole 800 mg/day in two divided doses and oral corticosteroids (1 mg/kg/day) with gradual tapering over one month, along with adjunctive measures. Three months later, the patient showed improvement following treatment.

Discussion:-

Human toxocariasis is a helminthozoonosis that primarily impacts people of low socioeconomic class in tropical and subtropical regions [1]. Two main species of Toxocara affect humans: Toxocara canis (dogs) and Toxocara cati (cats). First described in 1960 by Ashton [2], ocular toxocariasis is a rare parasitic nematode infection that mainly affects the pediatric population, with 80% of cases occurring in individuals under the age of 16 [3].

There are three main clinical forms: panuveitis with chronic endophthalmitis-like presentation, posterior pole granuloma, and peripheral granuloma with a tractional fibrous band. We should consider these in the presence of any "whitish choroidal-retinal lesion resembling a granuloma" [4].

The presentation is primarily unilateral, but bilateral forms have been described [5]. The diagnosis is then confirmed by immunoenzymatic technique (ELISA) in blood or intraocular biological fluid (aqueous humor, vitreous) with excellent specificity and sensitivity of more than 95% [6].

Treatment involves two main aspects: an antiparasitic component based on albendazole (800 mg/day for adults and 400 mg/day for children) and an anti-inflammatory component based on corticosteroids [7].

Conclusion:-

Ocular involvement is common in toxocariasis **T. cati** is rare. It draws the attention of ophthalmologists to the possibility of ocular toxocariasis even in adults.

References:-

[1]. Lotsch F, Vingerling R, Spijker R, Grobusch MP, 2017. Toxocariasis in humans in Africa—a systematic review. Travel Med Infect Dis 20: 15–25. [PubMed] [Google Scholar]
[2] Ashton N. Larva granulomatosis of retina due to toxocaracanis. Br J Ophthalmol 1960;44(3):129—48
{3] De Visser L, Rothova A, De Boer JH, Van Loon AM, Kerkhoff FT, Canninga-van Dijk MR, et al. Diagnosis of ocular toxocariasis by establishing intraocular antibody production. Am J Ophthalmol2007;145:369—74.
[4] Daoudi C, Laghmari M, Naciri K, Handor H, Hafidi Z, Hajji C, Daoudi R. Toxocarose oculaire: à propos de deux cas et revue de la literature [Ocular toxocariasis: report of two cases and review of the literature]. Pan Afr Med J. 2014 Jan 30;17:71. French. doi: 10.11604/pamj.2014.17.71.3823. PMID: 25018821; PMCID: PMC4085946.
[5] Benitez del Castillo JM, Herreros G, Guillen JL, Fenoy S, Banares A, Garcia J. Bilateral ocular toxocariasis demonstrated by aqueous humor enzyme-linked immunosorbent assay. Am J Ophthalmol 1995;119(4):514—6.
[6]] Schantz PM, Meyer D, Glickman LT. Clinical, serologic, and epidemiologic characteristics of ocular toxocariasis. Am J Trop Med Hyg 1979;28(1):24—8.
[7] Rubensky-Elefant G, Hirata CE, Yamamoto JH, Ferreira MU. Human toxocariasis: diagnosis, worldwide seroprevalence and clinical expression of the systemic and ocular forms. Ann Trop Med Parasitol2010;104:3—23.