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Ocular and Orbital Toxocariasis Revealed by Progressive Visual Impairment and Vitreopapillary Fibrosisin a 16-Year-Old Girl: A Multimodal Imaging Case Report

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1. Abstract

1.1. Background

Ocular toxocariasis is a parasitic infection caused by Toxocara larvae, predominantly affecting children and adolescents. It typically presents as unilateral posterior uveitis associated with hyalitis, retinal granulomas, and vitreoretinal fibrosis. Vitreopapillary fibrosis is a characteristic but underrecognized feature, while orbital involvement remains rare.

1.2. Case Presentation

A 16-year-old girl presented with progressive blurred vision in the right eye. Ophthalmologic examination revealed posterior synechiae, early posterior subcapsular cataract, and hyalitis graded 2+. Fundus examination demonstrated dense vitreoretinal fibrotic bands originating from the optic disc, associated with whitish inflammatory retinal lesions. Fluorescein angiography showed late staining of inflammatory lesions without neovascularization. Serology for Toxocara IgG was positive. A palpable right supra-palpebral mass was noted. Orbital MRI revealed a well-defined cystic lesion consistent with a parasitic cyst. Combined antiparasitic and systemic corticosteroid therapy resulted in clinical improvement.

1.3. Conclusion

This case highlights the diagnostic value of vitreopapillary fibrosis and multimodal imaging in ocular toxocariasis and emphasizes the importance of considering parasitic etiologies in adolescents presenting with posterior uveitis and orbital masses.

1.4. Introduction

Human toxocariasis is a zoonotic parasitic infection caused by the larvae of Toxocara canis or Toxocara cati. Ocular toxocariasis occurs when larvae migrate to ocular tissues, inducing a chronic inflammatory response. It represents an important cause of unilateral posterior uveitis in children and young adults and may lead to significant visual morbidity if diagnosis and treatment are delayed.

2. Case Presentation

A 16-year-old female presented with a progressive decrease in visual acuity of the right eye evolving over several weeks. Best-corrected visual acuity was 8/10. Slit-lamp examination revealed posterior synechiae and an early posterior subcapsular cataract. Vitreous examination showed hyalitis graded 2+. Fundus examination revealed dense vitreoretinal fibrotic tissue originating from the optic disc and extending toward the posterior pole and mid-peripheral retina, associated with ill-defined inflammatory retinal lesions. This vitreopapillary fibrotic pattern is highly suggestive of chronic ocular toxocariasis (Figure 1).

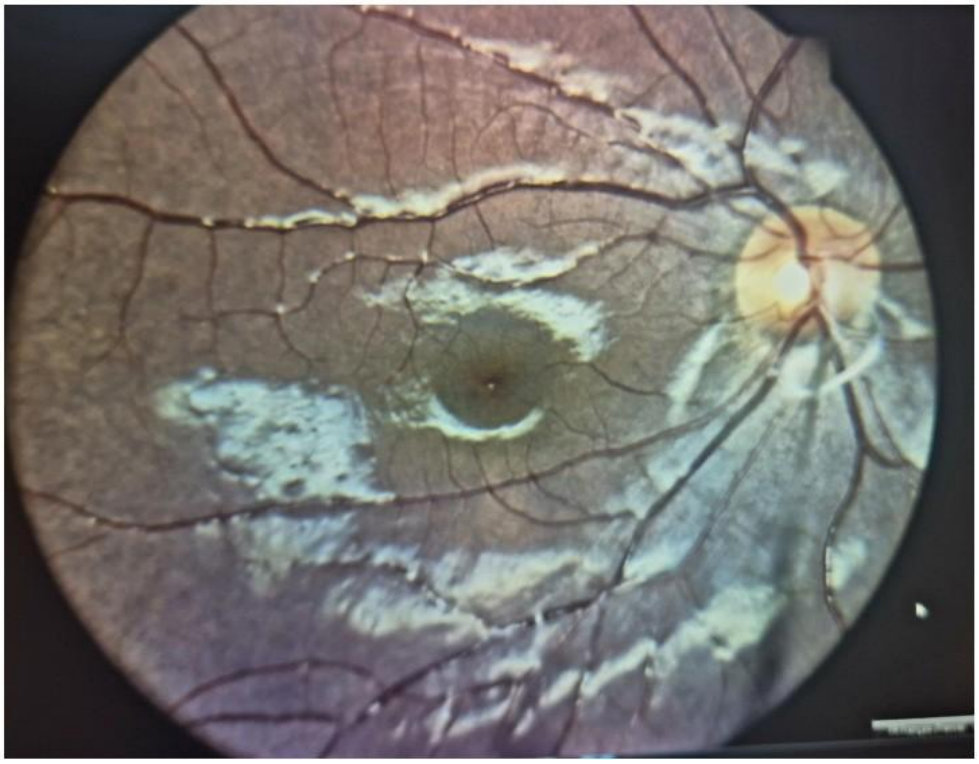
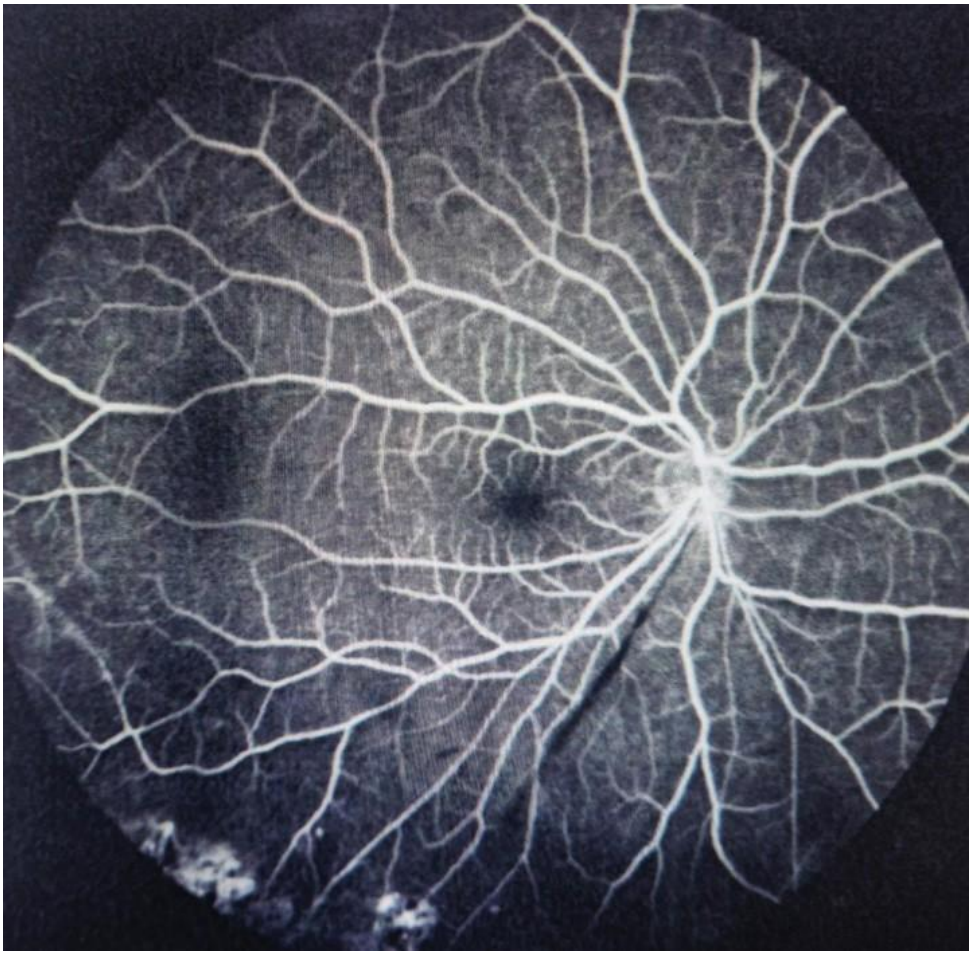


Figure 1: Color fundus photograph of the right eye.

2.1. Fluorescein Angiography Findings

Fluorescein angiography demonstrated early hypofluorescence of inflammatory lesions followed by progressive late hyperfluorescence with blurred margins, reflecting active inflammatory granulomatous disease. Peripheral vascular leakage was observed, without evidence of retinal or optic disc neovascularization (Figure 2).



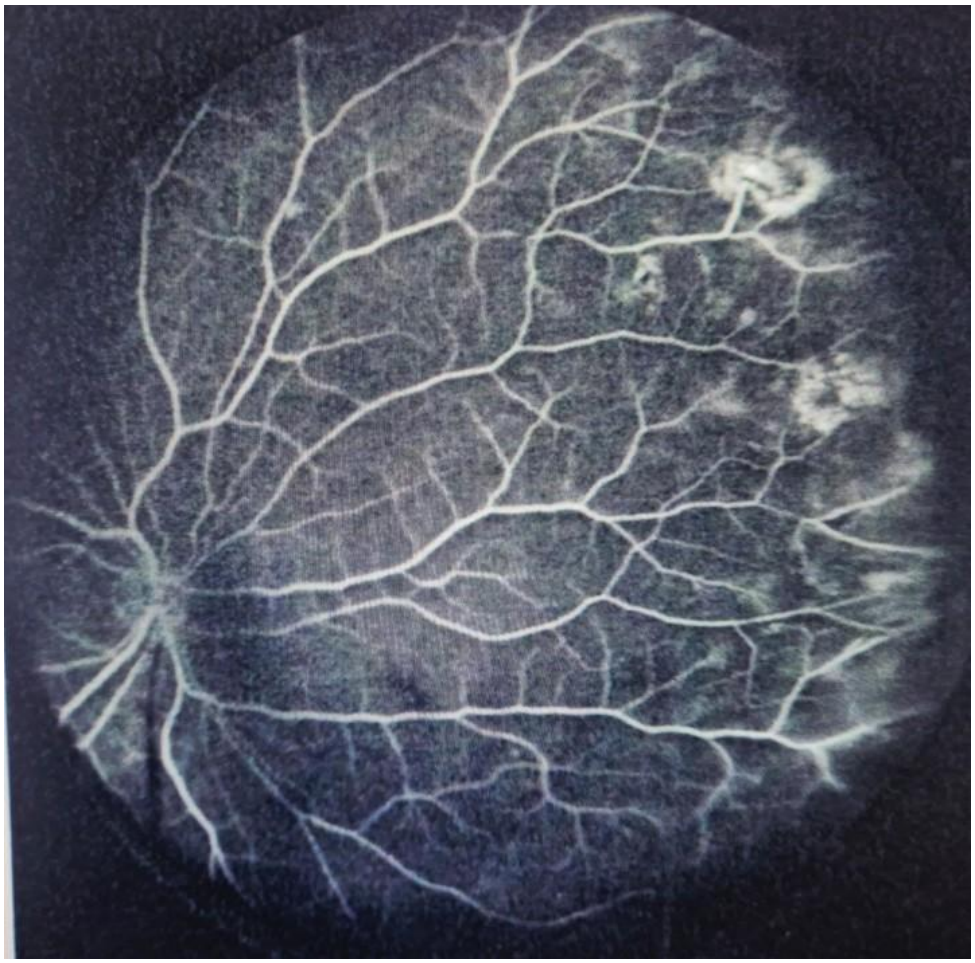


Figure 2: Fundus fluorescein angiography.

2.2. Orbital Imaging

Clinical examination revealed a palpable right supra-palpebral mass. Orbital magnetic resonance imaging showed a well-circumscribed cystic lesion located in the superior palpebral region. The lesion appeared hyperintense on T2-weighted images, showed no diffusion restriction, and demonstrated mild peripheral enhancement after contrast administration, without communication with the globe. These findings were highly suggestive of a parasitic cyst (Figure 3).

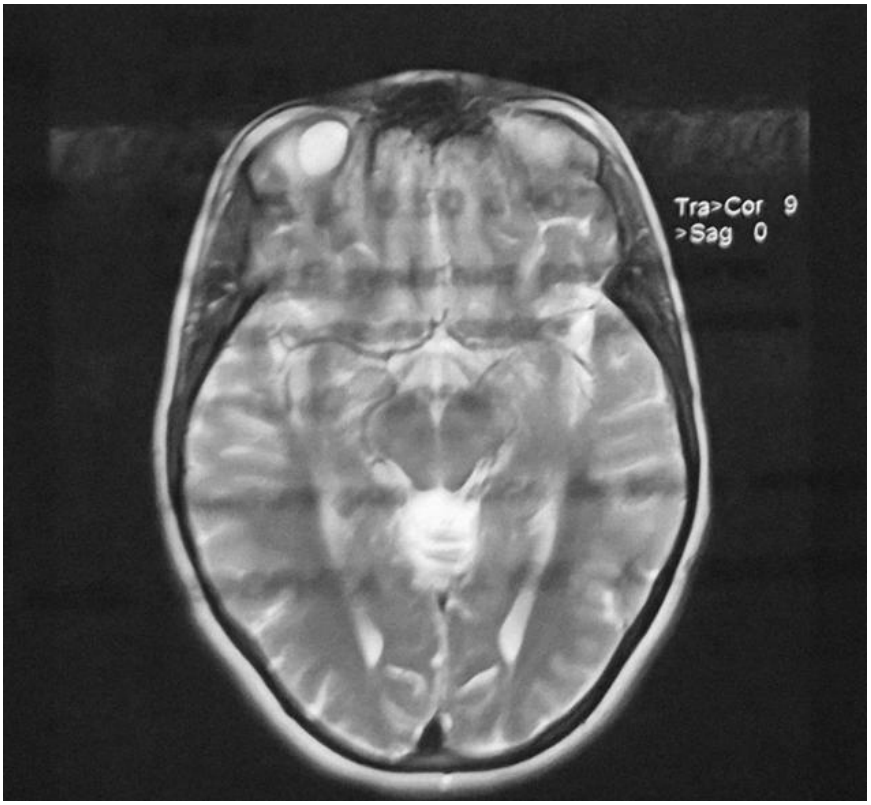


Figure 3: Orbital magnetic resonance imaging.

2.3. Treatment and Outcome

The patient was treated with albendazole 400 mg twice daily for 5 days, followed by 400 mg once daily for 10 days, combined with systemic oral corticosteroid therapy initiated concomitantly and progressively tapered. Clinical follow-up showed regression of hyalitis, stabilization of visual acuity, and no progression of the orbital lesion.

3. Discussion

Ocular toxocariasis is a parasitic infection caused by Toxocara canis or Toxocara cati, resulting from larval migration into ocular tissues. It predominantly affects children and young adults and may present with a wide spectrum of posterior segment manifestations, often mimicking other inflammatory or neoplastic conditions. The diagnosis is frequently delayed due to its nonspecific clinical presentation and the absence of pathognomonic signs.

In the present case, the patient exhibited progressive unilateral visual impairment associated with posterior synechiae, early cataract formation, vitreous inflammation, and characteristic chorioretinal lesions. The presence of a semi-transparent vitreous fibrotic veil originating from the optic disc is a well-recognized feature of chronic ocular toxocariasis and reflects longstanding vitreoretinal inflammation with fibrocellular proliferation. Such vitreopapillary traction bands are considered highly suggestive of this condition and help differentiate it from other causes of posterior uveitis.

Fluorescein angiography played a crucial role in assessing inflammatory activity, demonstrating late hyperfluorescence of the lesions without evidence of neovascularization. This angiographic pattern supports an inflammatory rather than ischemic or neoplastic process. Additionally, orbital magnetic resonance imaging revealed a well-defined cystic lesion in the supra-palpebral region, reinforcing the diagnosis of parasitic involvement and excluding alternative diagnoses such as orbital tumors.

Serological confirmation with positive anti-Toxocara IgG antibodies further supported the diagnosis, although serology alone is insufficient and must always be interpreted in conjunction with clinical and imaging findings. The therapeutic approach combining albendazole and systemic corticosteroids aims to eradicate the parasite while controlling the inflammatory response, thereby preventing further structural damage.

This case highlights the importance of multimodal imaging in ocular toxocariasis and underscores the need to consider this diagnosis in young patients presenting with unilateral posterior uveitis and vitreoretinal fibrosis. Early recognition and appropriate treatment are essential to limit irreversible visual impairment.

4. Conclusion

Vitreopapillary fibrosis is a key diagnostic clue in ocular toxocariasis. Multimodal imaging combined with serological testing allows accurate diagnosis and appropriate treatment, preventing irreversible visual sequelae.

References

1. Taylor MRH. Ocular toxocariasis. Br J Ophthalmol. 2007.
2. Shields JA, Shields CL. Ocular toxocariasis: a review. Surv Ophthalmol. 1984.
3. Stewart JM. Retina. 2005.
4. Despreaux R. Retina. 2016.
5. Magnaval JF. Lancet Infect Dis. 2001.
6. Fan CK. Lancet Infect Dis. 2015.