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Case Report

Ocular Tuberculosis - Uncommon Presentation in Pediatric Age

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Introduction

Ocular tuberculosis is a clinical challenge due to heterogeneous presentation and difficulty in obtaining ocular samples for microbiology. The incidence is difficult to specify because it is almost exclusively a presumptive diagnosis based on epidemiology and concordant ophthalmologic and systemic findings. The need for a high rate of clinical suspicion and the consequent delay in diagnosis is often responsible for advanced clinical presentations that require a multidisciplinary therapeutic approach. Thus, early onset of therapy is essential to suppress ocular inflammation and prevent progressive and irreversible damage.

Currently, standard treatment includes a 9-12-month course of anti-tuberculosis drugs, associated or not with systemic corticosteroid therapy. Despite proper treatment, it is possible and not uncommon progressing to vascular complications, such as neovascularization of the retina. The use of intravitreal injections of vascular endothelial growth factor (anti-VEGF) has been assumed in the literature as adjuvant therapy in these cases.

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Case Report

An 11-year-old female, from Guinea, with past medical history of myopia in the left eye, admitted to the emergency department by clinical condition with 7 months evolution of right eye redness and vision loss. Systemic symptoms have been ruled out and the physical examination was normal. The ophthalmologic examination revealed bilateral granulomatous uveitis with anterior (iris nodules, positive Tyndall effect, posterior synechiae) and posterior (choroidal tubercles) involvement, having initiated therapy with topical corticosteroids, mydriatic and cycloplegic agents and non-steroidal anti-inflammatory drugs. Optical Coherence Tomography and Angiography (OCTA) showed extensive sensorineural retinal detachment and choroidal elevation with central macula disorder. Due to the absence of improvement with topical therapy, systemic corticosteroid therapy with oral prednisone was initiated. The ongoing complementary investigation revealed an increase in sedimentation velocity (20mmHr) and positive Interferon Gamma Release Assay (IGRA).

The absence of Cytomegalovirus, Herpes simplex, Syphilis, Toxoplasmosis, Rickettsia and Bartonella sp infection has also been demonstrated. Computed tomography of the chest showed mediastinal lymphadenopathy compatible with tuberculosis. The search for mycobacteria in the respiratory samples was negative and vitreous humor biopsy was not performed because of the risk of vision loss. The patient started oral therapy with Isoniazid, Rifampicin, Pyrazinamide and Ethambutol. There was a marked improvement in visual acuity following 2 months of tuberculostatic therapy and systemic corticosteroid therapy. After reducing the oral dose of prednisone, there was a new worsening of the ocular disease, with decreased visual acuity, aiming at inflammatory neovascularization in ophthalmologic reassessment. In this context, intravitreal therapy with anti-VEGF (Bevacizumab) was performed. The response was favorable, with resolution of neovascularization, without recurrence or worsening since then. Currently asymptomatic, under triple maintenance tuberculostatic therapy and in progressive discontinuation of systemic corticosteroid therapy [1-3].

Discussion

Ocular tuberculosis should always be considered in the differential diagnosis of panuveitis. Because it is difficult to diagnose tuberculosis in pediatric age due to the nonspecific symptoms, the authors emphasize that it is essential to integrate complementary test findings for clarification and early onset of treatment. The possibility of complications in the pediatric population is also evidenced, especially when delay in diagnosis is observed. Intravitreal infection of anti-VEGF as adjuvant therapy appeared to be effective in the final clinical outcome.

Conclusion

It is difficult to establish the diagnosis of ocular tuberculosis in pediatric patients. The authors highlight the importance of multidisciplinary integration of various complementary exams and early treatment.

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Conflicts of Interest

The authors have declared that no competing interests exist.

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