

# ijo

## Indian Journal of Ophthalmology Case Reports

*Editor*

Santosh G Honavar, MD, FACS, FRCOphth

ISSN 2772-3070

Volume 02, Issue 03

July - September 2022



*official journal of*  
ALL INDIA OPHTHALMOLOGICAL SOCIETY  
*open access at [ijoreports.in](http://ijoreports.in)*

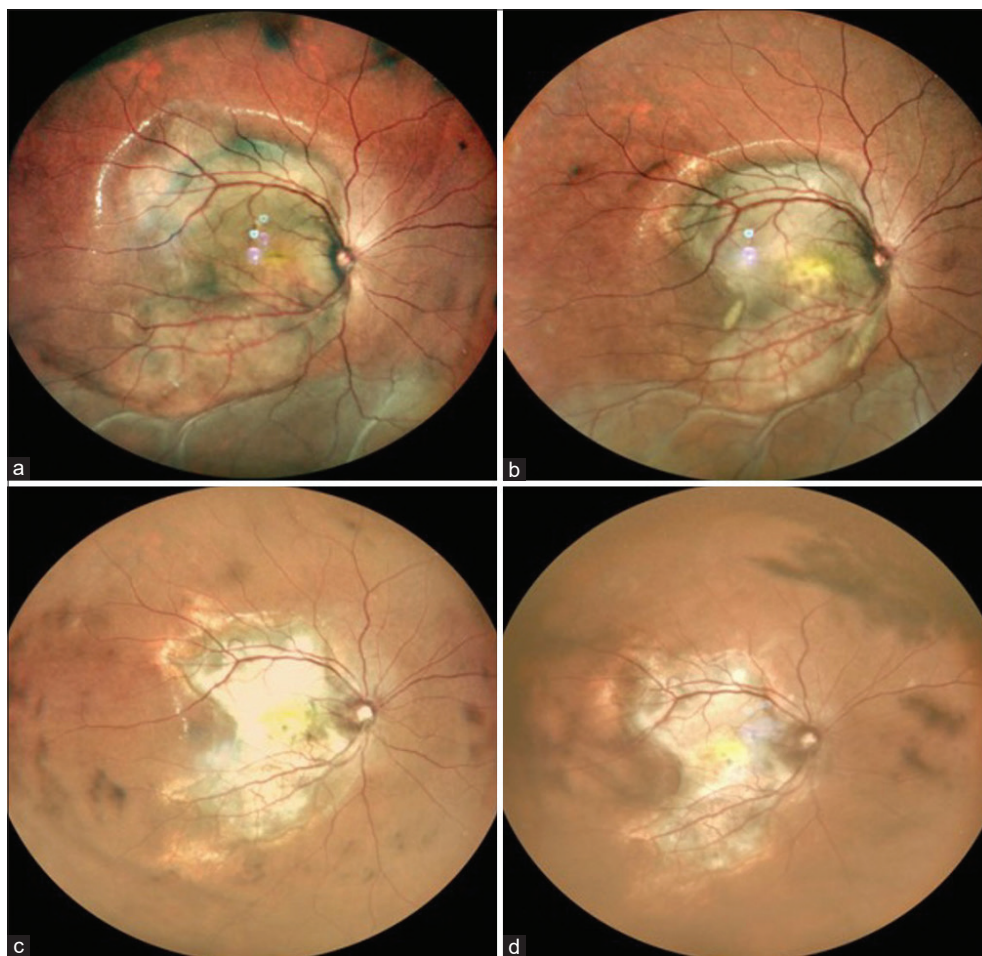
Medknow



Wolters Kluwer

## Managing pediatric choroidal tuberculoma: A case report

Navneet Mehrotra, Manish Nagpal, Akansha Sharma



**Figure 1:** (a) Right eye showing a single large, yellowish, elevated mass suggestive of choroidal tuberculoma at the posterior pole and an exudative retinal detachment seen inferiorly between 4 and 8 o'clock hours. (b) Reduction in perilesional fluid and inferior exudation 1 month after starting high-dose steroid therapy and intravitreal anti-VEGF. (c) Decrease in the size of the choroidal tuberculoma with complete resolution of the exudative component a month after second intravitreal anti-VEGF therapy. (d) Subretinal fibrosis *in situ* a month after third intravitreal anti-VEGF injection and tapering of steroids. anti-VEGF = anti-vascular endothelial growth factor

Access this article online	
Quick Response Code:	Website: www.ijoreports.in
	DOI: 10.4103/ijo.IJO_370_22

Department of Ophthalmology, Retina Foundation, Ahmedabad, Gujarat, India

**Correspondence to:** Dr. Navneet Mehrotra, Retina Foundation, Near Shahibag Underbridge, Shahibag, Ahmedabad - 4, Gujarat, India. E-mail: navneetmeh@yahoo.com

Received: 14-Feb-2022

Revision: 08-Apr-2022

Accepted: 09-May-2022

Published: 16-Jul-2022

**Key words:** Choroidal Tuberculoma, *Mycobacterium tuberculosis*, subretinal fibrosis

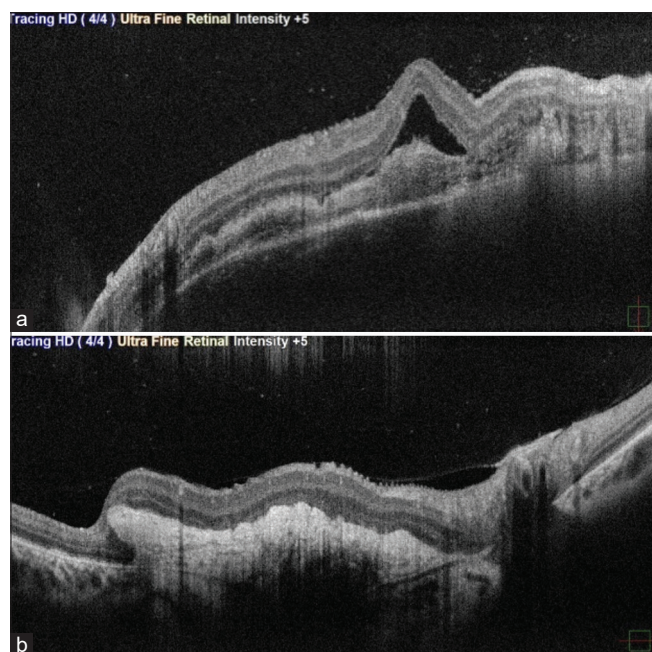
*Mycobacterium tuberculosis* (MTB) infects roughly one-third of the global population, with the body triggering an immune response that walls off the bacteria in dense cellular masses

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** WKHLRPMedknow\_reprints@wolterskluwer.com

**Cite this article as:** Mehrotra N, Nagpal M, Sharma A. Managing pediatric choroidal tuberculoma: A case report. Indian J Ophthalmol Case Rep 2022;2:826-7.





**Figure 2:** (a) Baseline OCT shows presence of subretinal fluid with undulated choroid. (b) Follow-up OCT shows complete resolution of the fluid component posttreatment with residual scarring. OCT = optical coherence tomography

known as granulomas,<sup>[1]</sup> which are surrounded by fibrous cuffs that serve to contain the MTB bacilli.<sup>[1,2]</sup>

A 10-year-old male patient presented with decreased vision in the right eye for 1 month. The patient was started on antitubercular treatment (ATT) by a pulmonologist 10 days before presentation at our institution. The best-corrected visual acuity (BCVA) was 20/400 in the right eye and 20/20 in the left eye. Anterior segment was normal for both the eyes. The intraocular pressure was 18 and 26 in the right eye and the left eye, respectively.

Fundus examination of the right eye showed a single large, yellowish, elevated mass suggestive of choroidal tuberculoma at the posterior pole and an exudative detachment [Fig. 1]. Left eye fundus examination was within normal limits. Optical coherence tomography (OCT) of the right eye showed presence of subretinal fluid and elevation of retinal layers [Fig. 2].

Mantoux test was positive (17 × 17 mm). The blood counts were normal with a raised erythrocyte sedimentation rate of 23 mm/h and C-reactive protein of 17.7 mg/L. Contrast-enhanced computed tomography (CECT) chest showed mediastinal and right hilar adenopathy with necrotic nodes and secondary involvement of mid-esophageal region. Chest X-ray showed right paratracheal adenopathy with a primary complex.

Hence, we started the patient on intravenous methyl prednisolone 500 mg for 3 days, followed by high-dose oral

steroids (1.5 mg/kg/day) in a tapering manner. Intravitreal injections of ranibizumab were given at monthly intervals. After 3 months of follow-up, the vision improved to 20/120 with regression of lesion due to subretinal fibrosis.

## Discussion

In our study, the patient had TB and was on ATT when he was started on high-dose steroids at presentation. After starting intravitreal injections of ranibizumab,<sup>[3,4]</sup> we found a significant decrease in the size of the lesion with complete resolution of the exudative detachment. Bansal *et al.*<sup>[5]</sup> used anti-vascular endothelial growth factor (anti-VEGF) therapy to treat tubercular granulomas, which were highly vascular or associated with either exudation or massive serous detachments or showed poor response to ATT and corticosteroids.

There was minimal visual gain in this patient possibly due to late presentation, which resulted in subretinal fibrosis. Hence, it is of utmost importance to conduct ophthalmic screening of all pediatric patients with TB to rule out the possible affection of the disease in the eyes and bring about prompt management.

In our case, intravitreal anti-VEGF injections helped in rapid regression of tuberculoma and absorption of exudative fluid. The role of intravitreal anti-VEGF injection has not been shown before in pediatric choroidal granuloma.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

## References

1. Russell DG, Barry CE, Flynn JL. Tuberculosis: What we don't know can, and does, hurt us. *Science* 2010;328:852-6.
2. Russell DG. Who puts the tubercle in tuberculosis? *Nat Rev Microbiol* 2007;5:39-47.
3. Agarwal M, Gupta C, Mohan VK, Upadhyay PK, Jha V. Correlation of vascular endothelial growth factor with the clinical regression of tubercular granuloma. *Indian J Ophthalmol* 2020;68:2037-40.
4. Chawla R, Sundar DM, Sharma A, Hasan N. Managing a recurrence of choroidal tuberculoma two years following primary therapy. *Indian J Ophthalmol* 2019;67:1713-4.
5. Bansal R, Beke N, Sharma A, Gupta A. Intravitreal bevacizumab as an adjunct in the management of a vascular choroidal granuloma. *BMJ Case Rep* 2013;2013:bcr2013200255.