

## SYSTEMIC TUBERCULOSIS REVEALED BY OPHTHALMIC MANIFESTATIONS

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### ABSTRACT

Tuberculosis can have a variety of ocular manifestations, and consequently may mimic a number of ocular inflammatory diseases. Moreover, the absence of pulmonary tuberculosis does not rule out the diagnosis of ocular tuberculosis. Most commonly, tuberculosis presents as a posterior uveitis that indicates a choroidal involvement. We report a case of choroidal location as a first manifestation of disseminated tuberculosis; the choroidal granulomas were discovered before the diagnosis of tuberculosis and guided the investigations, which allowed the identification of *Mycobacterium Tuberculosis Bacillus* in the body.

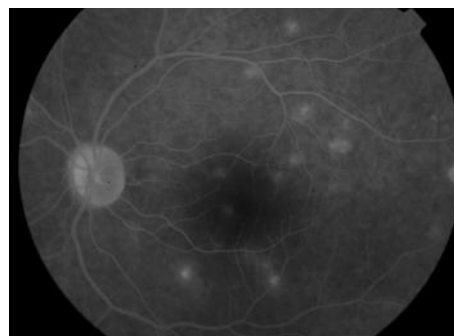
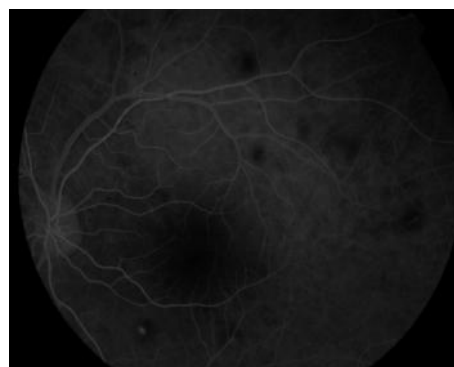
**Keys words:** tuberculosis, intraocular, choroidal

### INTRODUCTION

Tuberculosis (TB) is an airborne infectious disease that is caused by *mycobacterium tuberculosis* and related with formation of granulomatous infection that disseminates by haematogenous spread from the lungs [1]. Tuberculosis most commonly affects the lungs, but has many extrapulmonary manifestations as well, including intraocular involvement. We report a case of choroidal location as a first manifestation of disseminated tuberculosis.

### CASE REPORT

A 28-year-old female, presented with asthenia, weight loss, and a marked decrease in visual acuity in both eyes. On examination, her best corrected visual acuity for distance was 6/10 ODG. Slit lamp examination of the anterior segment and intraocular pressure were normal. Vitreous was normal with a choroidal tubercles in both fundi. (Fig 1 a, 1b) Choroidal involvement was bilateral, with multiple lesions, mostly located at the posterior pole. The size of the granuloma ranged from 1/8 to 1/2 of a disc diameter. Fluorescein angiography showed early prolonged hypo-fluorescence and late moderate hyper florescence. (Figure 2a, 2b)



**Figure 1a-1b:** Fluorescein angiography showed early hypo fluorescence and late moderate hyper florescence in the left eye

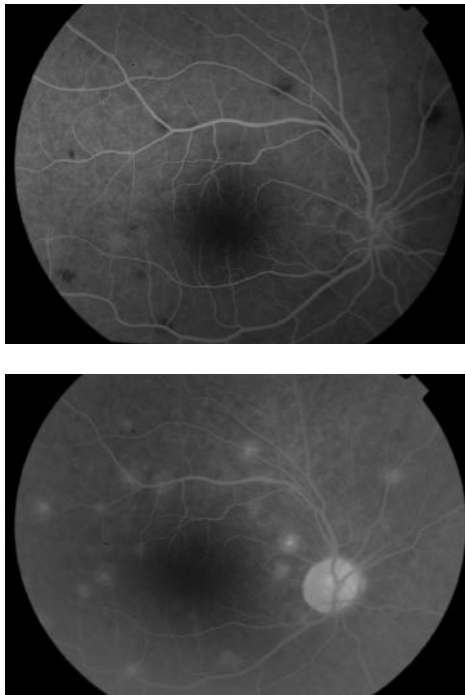


Figure 2a – 2b: Early hypo fluorescence and late moderate hyper fluorescence in the right eye

In our patient, the choroidal granulomas were discovered before the diagnosis of disseminated tuberculosis and guided the investigations, which allowed the identification of *Mycobacterium Tuberculosis Bacillus* in the body.

#### DISCUSSION:

Ocular tuberculosis may affect the eye by direct invasion of the tubercle bacillus following hematogenous dissemination with local destruction and inflammation, or via a hypersensitivity reaction to the bacillus located elsewhere in the body. [2].

The clinical presentations in intraocular tuberculosis are anterior uveitis, intermediate uveitis, posterior or panuveitis, retinitis, vasculitis, neuroretinitis, optic neuropathy, endophthalmitis, and panophthalmitis [3].

Rare manifestations include the eyelids (lupus vulgaris), the conjunctiva (conjunctivitis), cornea (ulcers and phlyctenulosis), and the sclera (scleritis). The most common manifestations include uveal involvement in the form of tubercles, tuberculomas, and serpiginous-like choroiditis. Other manifestations include orbital apex syndrome and lesions associated with neurotuberculosis (disc edema and sixth nerve palsies). [4] In our cases the manifestation was in the form of bochut's tubercles

The diagnostic workup of patients with suspected ocular tuberculosis has both systemic and ocular components. The systemic investigations include radiography, Mantoux testing, and interferon- $\gamma$  (gamma) release assays (IGRA). Ocular investigations of ocular fluids or tissue biopsies include microscopy, culture, and PCR (polymerase chain reaction) techniques. The treatment includes the use of topical, periocular, or systemic corticosteroids with a four-drug regimen of antitubercular therapy. [5]

#### CONCLUSION

Tubercles can arise in the early stages of progression of TB and indicate hematogenous dissemination before the development of symptomatic disease. [4] A seemingly innocuous ocular involvement may be associated with significant systemic tuberculosis. As in our case, sometimes the ocular finding can help the treating physician to make a diagnosis of systemic tuberculosis.

#### ACKNOWLEDGEMENT

All named authors were involved in the conception and design of the study, and interpretation of data.

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