

CASE REPORT

CASE OF BILATERAL ANTERIOR SEGMENT TUBERCULOSIS

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ABSTRACT: Tuberculosis is an important cause of uveitis in our country. India has been declared the country with the highest tuberculosis burden with 25 % of the cases.⁽¹⁾ This is especially true in Andhra Pradesh and Telangana which have a high percentage of affected patients. However, tuberculous uveitis is usually a unilateral presentation. We report a case of bilateral uveitis of tuberculous origin in a 55 year old woman. She presented with different tuberculous manifestations in the two eyes. While the RE showed non granulomatous uveitis with sclerosing keratitis, the LE showed granulomatous uveitis with mutton fat keratic precipitates. Systemic examination revealed an enlarged lymph node which was positive for tuberculosis on biopsy. She was hence diagnosed as extra pulmonary tuberculosis and was treated with ATT regimen. In this patient, uveitis was the initial manifestation and resulted in a systemic diagnosis.

CASE REPORT: A 55 year old female patient came with complaints of redness, pain, diminution of vision in right eye of 3 weeks duration. Misdiagnosed as conjunctivitis, she had been treated with topical antibiotics but found no relief and hence was referred to our outpatient department. On examination, the visual acuity in the right eye was counting fingers 1mt and left eye was 6/60. On examination of the right eye, the lids were normal with no evidence of blepharitis. Conjunctiva showed circum corneal congestion more in the temporal quadrant. With slit lamp examination, cornea revealed arcuate, mid stromal, candy floss opacity in the superomedial quadrant, concentric to limbus, with clear space in between. There was also a circular patch of ground glass stromal opacity, 4mm diameter in the temporal quadrant. There was grade 2 flare with minimal cells. There was loss of iris pattern with posterior synechiae of 3 clock hours wide at 3'o clock position and exudates bordering the nasal collarette for 5 clock hours. There was immature senile cataract (predominantly nuclear gr 2). The fundus, seen hazily, appeared normal.

On examination of the left eye, lids were normal and conjunctiva was quiet. Cornea on slit lamp examination was clear. Multiple mutton fat keratic precipitates were observed on the corneal endothelium. Anterior chamber revealed no cells of flare. Iris pattern was normal and pupil regular. Pigment clumps on the lens at 3 o clock position suggested broken synechiae of previous attack. There was an immature senile cataract (nuclear gr 2) and fundus was unremarkable.

The intraocular pressure was 12mm and 14mm in the RE and LE respectively.

Systemic examination revealed an enlarged upper cervical lymph node in the neck.

Patients' blood work revealed elevated ESR and CRP levels. Blood counts were normal. Chest X-ray was unremarkable. Tuberculin skin test showed induration of 12 mm and was considered positive. Lymph node biopsy revealed areas of coagulative necrosis and a diagnosis of

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extra pulmonary tuberculosis was made. Patient was started on Anti Tubercular Therapy and after 1 week, started on topical Prednisalone eye drops and Cyclate eye drops for the right eye. On follow up, the right eye improved symptomatically with reduction in pain and redness and showed improvement of vision up to 6/60 over 1 month. The ground glass opacity resolved and the candy floss opacity stabilized.

DISCUSSION:

Ocular Tuberculosis: The association of Tuberculosis with ocular disease has been long accepted. Recognition of choroidal tubercles in the medical literature was first noted between 1830 and 1844. However, the current incidence of ocular TB is uncertain. It is estimated that 1.4% of persons with Pulmonary Tuberculosis (PTB) develop ocular manifestations, but many patients with ocular tuberculosis have no evidence of pulmonary tuberculosis. Ocular M. tuberculosis infection is most often a result of hematogenous spread during PTB or Extra Pulmonary Tuberculosis (EPTB). Primary ocular infection in which bacilli enter the body through the conjunctiva is rare. Symptomatic disease is most commonly observed during reactivation of dormant lesions in ocular tissue rather than during the initial infection. Additionally, immune-mediated ocular TB can occur due to hypersensitivity to M. tuberculosis antigens from a distant focus (such as lungs). This hypersensitivity causes inflammation despite the absence of the bacterium in the eye.

Ocular TB is often unilateral and asymmetric.⁽²⁾ TB can cause a wide variety of ophthalmic findings and affects all ocular structures, ranging from the ocular surface through the optic nerve and to the central nervous system. After choroid involvement, anterior uveitis and sclerokeratitis are among the most common manifestations of TB in the eye.⁽³⁾ A uveitis clinic in Southern India reported 0.39% of its cases were caused by TB from 1992 to 1994.⁽⁴⁾ Other anterior segment presentations of TB include conjunctival granulomas, phlyctenulosis, sclerokeratitis, interstitial keratitis, anterior uveitis, and iridocyclitis. Anterior uveitis usually presents with mutton-fat keratic precipitates, photophobia, and floaters. Non granulomatous uveitis may also be seen.

The diagnosis of ocular TB is important because prompt treatment may improve the individual patient's outcome. Delayed diagnosis can lead to pain, vision loss, and systemic complications of the infection. Unfortunately, there is no pathognomonic ophthalmic finding for ocular TB. Tuberculosis presents in a myriad forms in the eye. It is a master masquerader mimicking many diseases making diagnosis very difficult. Obtaining a tissue sample for diagnosis is not practical in a clinical setting and the available diagnostic tests have limitations.

Thus clinical suspicion is an imperative first step. A review by Gupta et al.⁽⁴⁾ in 2007 updated the clinical spectrum, laboratory investigation, and diagnostic criteria that would assist in the diagnosis of presumed or confirmed intraocular TB so that anti-tuberculous therapy (ATT) can be initiated on a rational basis. With our patient, presence of granulomatous keratic precipitates in one eye, presence of sclerosing keratitis in the other with a positive lymph node biopsy helped make a definitive diagnosis of tuberculosis. Prompt institution of Anti Tubercular Therapy resulted in rapid control of infections and rational use of topical immunosuppressant resulted in improvement of vision.

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CONCLUSION: Tuberculosis is a master masquerader with protean manifestations. Thus ophthalmologists play an important role in identifying patients with ocular manifestations of tuberculosis. They must keep a high index of suspicion when examining anterior segment inflammations. Early diagnosis facilitates early therapy limiting long term ocular and systemic morbidity.

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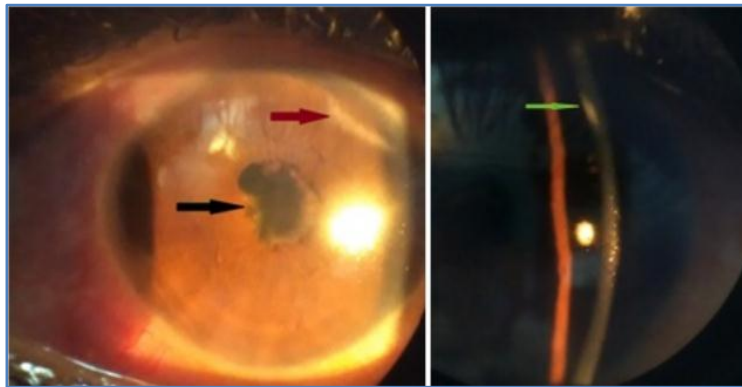


Figure 1

Figure 1: Slit lamp photograph of right eye: Black arrow pointing to the posterior synechiae, the red arrow pointing to the crescent of keratitis parallel to the limbus, the ground glass opacity is seen just nasal to the pupil, the green arrow showing the deep stromal location of the opacity.

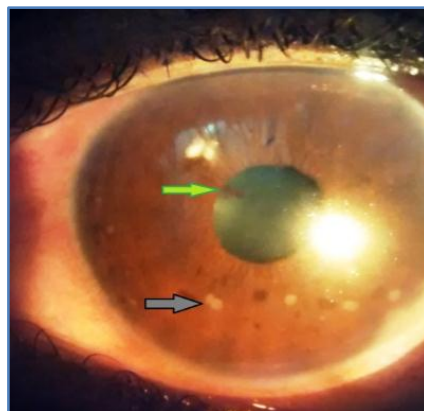


Figure 2

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Figure 2: Slit lamp photograph of LE; green arrow denoting pigment clumps on lens suggestive of broken synechiae; grey arrow denoting large, greasy, mutton fat keratic precipitates.

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