Chapter 8

Case Study:
Resolving Diagnostic Uncertainties in the Clinical Presentation of Ocular Tuberculosis

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ABSTRACT

In the developing countries, incidence of systemic tuberculosis is very high, with over 8 million new cases each year. The incidence of tuberculous uveitis is also rising correspondingly. It is difficult to diagnose ocular tuberculosis because of the lack of specific ocular findings and specific confirmatory laboratory tests. However, in a developing country like India, where the prevalence of latent tuberculosis is high, uveitis of unexplained cause not fitting into known uveitis entities, in presence of Monteux positivity, is more likely to be tubercular in origin. Hence, early diagnosis and prompt treatment with antitubercular treatment may result in dramatic drop in recurrence and improve individual patient outcomes.

INTRODUCTION

The world health organization (WHO) has declared tuberculosis (TB) to be a global emergency (centre for disease control and prevention, 1994 & 2004; Duke-Elders & Perkin, 2004). It has estimated 9 million cases and 2 million deaths from TB for 2005(Sharma, 2011). Incidence of ocular TB ranges from 1.4 – 5.74% (Sharma A 2011). About 1.4% of people with pulmonary TB (PTB) develop ocular manifestations (Chuka-Okosa, 2006; Gupta, 2005; Biswas, 1996)

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In 1954, the Wilmer Eye institute ascribed 22% of uveitis were attributable to TB (Woods, 1961). In the 1940’s, Guyton and Woods placed TB as the cause of 80% of all granulomatous uveitis.

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 infection. Diagnosis is also important from public health perspective because identification and treatment of coexisting PTB may prevent TB transmission to others. Unfortunately, there is no pathognomonic ophthalmic finding for ocular TB. Hence, ocular TB is difficult to diagnose due to its similarity to other causes of uveitis, the invasiveness of obtaining tissue samples, and limitations of available diagnostic tests. Clinical suspicion is the first step toward the correct diagnosis (Chuka-Okosa, 2006; Kurup, 2006; Tabara, 2005; Deschenes, 2006; Kuruvilla, 2003; Demicri, 2004; Varma, 2006; Mistr, 2006; Devoe, 1964).

CASE NO. 1

A 62-year-old female patient reported to our hospital in January 2012, complaining of blurring of vision and floaters in left eye for 2 months. There were recurrent episodes of the same complaints in the past; the visual acuity in her left eye was 6/9 and that in her right eye was 6/6. Anterior segments were normal. Fundus examination revealed patches of active choroiditis disseminated all over the fundus of left eye. On fundus fluorescein angiography hypofluorescence with late staining was seen. Mantoux was strongly positive (16mm) along with lymphocytosis. Intravenous Methyl prednisolone 1 gm was given for 3 days along with four drugs anti-tubercular treatment (Rifampicin 600mg, INH 300mg, Ethambutol 800mg, Pyrazinamide 1500mg) in addition to maintenance systemic steroids in tapering doses. Lesions healed completely in four weeks. There had been no recurrence even after 2 years after completion of treatment.

CASE NO. 2

A 70-year-old male patient presented with complaint of painful diminution of vision with redness in right eye 1 year back. He had a history of recurrent episodes of similar complaints for the last 2 years. Visual acuity in his right eye was found to be 6/60 and in that in his left eye was 6/6. On examination, his right eye showed ciliary flush, along with cells 2+, flare 1+, and old and fresh keratic precipitates along with posterior synechiae at 5 o’clock and 9 o’clock positions. The left eye was quiet. On investigation, Monteux test was strongly positive (> 10mm induration) and lymphocytosis was present. His chest x-ray showed no signs of pulmonary TB.

The patient was stared on four-drug ATT for six months along with systemic and topical steroids with cycloplegic drugs. He was asked to follow up after a month.

Subsequently, the patient was lost to follow-up for a year. He reported back after a year with complaints of pain, redness, blurring of vision in left eye. Vision in his right eye was PL+, PR defective in temporal quadrant and in left eye was 6/60. On examination, the patient had occlusio papillae in right eye and old & fresh KP’s with aqueous flare in left eye. The right eye was pseudophakic and media was hazy due to multiple vitreous opacities. On B-Scan-multiple vitreous membranes were seen. On revealing past treatment history, we came to know that he has taken ATT for only one month which was given for his similar complaints in right eye and stopped taking the drugs by himself as he got relieved of his acute symptoms. The patient was restarted on ATT under category 2 as defaulter and his vision improved, and fundus lesions also started to regress.