

Tubercular Nodular Episcleritis

Bhargav Prasad Bathula¹, Satyanarayana Pappu², Sanjeeva Rao Epari³, Jayakar Babu Palaparti¹, Josna Jose⁴ and Prasanna Kumar Ponnammalla⁵

Departments of Tuberculosis and Chest¹, Ophthalmology², Pathology³ and Social and Preventive Medicine⁴, Konaseema Institute of Medical Sciences and Research Foundation, Amalapuram, Andhra Pradesh and Department of Microbiology, Rangaraya Medical College⁵, Kakinada, Andhra Pradesh

ABSTRACT

A 12-year-old male child suffering from pain, redness, blurring and watering of right eye since six months was diagnosed as suffering from nodular episcleritis probably tuberculosis. Diagnosis was supported by the additional finding of enlarged cervical lymph node found on aspiration cytology. Complete resolution occurred after anti-tuberculosis therapy.

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Key words: Episcleritis, Tuberculosis, Anti-tuberculosis treatment.

INTRODUCTION

World Health Organization (WHO) declared tuberculosis (TB) as a "Global Emergency".¹ TB may cause disease in all parts of the human body including eyes. In the eye, detecting TB is difficult because it is uncommon and usually not suspected, histological examination may not be possible because biopsy leads to severe complications, like keratitis, cataract and loss of vision.

CASE REPORT

A 12-year-old boy presented with complaints of pain, redness of right eye with blurring of vision and watering of eye since six months. He had received antibiotics and steroid eye drops and anti-inflammatory eye ointments without any relief. He was examined by the ophthalmologist. His right eye was red, tender with nodular opacity in the centre of congestion. A pinkish nodule of 3mm size was found at 3-4 mm from limbus and moving freely with conjunctiva and episcleral tissue (Figure 1A). Visual acuity was 6/6 in both eyes. Slit lamp examination showed involvement of episclera. Cornea was clear and uveal tissue was not involved. A diagnosis of nodular episcleritis was made. Cotton swabs were taken for bacterial culture and acid-fast bacilli but were negative. Biopsy was not attempted in view of possible damage to the sclera. He also had an enlarged, non-tender solitary upper cervical lymph



Figure 1A. Photograph of the patient showing evidence of episcleritis before treatment.

node in the neck. No other group of lymph nodes were palpable. Fine needle aspiration cytology of cervical lymph node showed caseous necrosis, clusters of epithelioid cells, occasional Langerhans type of giant cells and polymorphous population of lymphoid cells comprising of immunoblasts, lymphoblasts and

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Correspondence and reprint requests: Dr Bhargav Prasad Bathula, House No. 70-17A-2/2, Sashikanth Nagar, RTA Office Road, Near Municipal Water Tank, Kakinada-533 005, East Godavari Distt, Andhra Pradesh, India; Phone: 91-884-2377648; E-mail: bathula39@yahoo.com

mature lymphocytes. Features were suggestive of granulomatous lymphadenitis, possibly of tubercular origin. Erythrocyte sedimentation rate was 75mm/hr, rheumatoid arthritic factor were negative. Chest radiograph showed no evidence of pulmonary TB. Tuberculin test was strongly positive showing vesicle with fluid ruptured leading to ulceration. Anti-tuberculosis treatment (ATT) was started under Revised National Tuberculosis Control Programme, Directly Observed Treatment, short-course Category-1 according to his body weight.² The patient improved markedly, relieved from redness and pain of the right eye. After two months of ATT complete resolution of eye sign and symptoms had occurred (Figure 1B). He completed the treatment and had no relapse of symptoms.

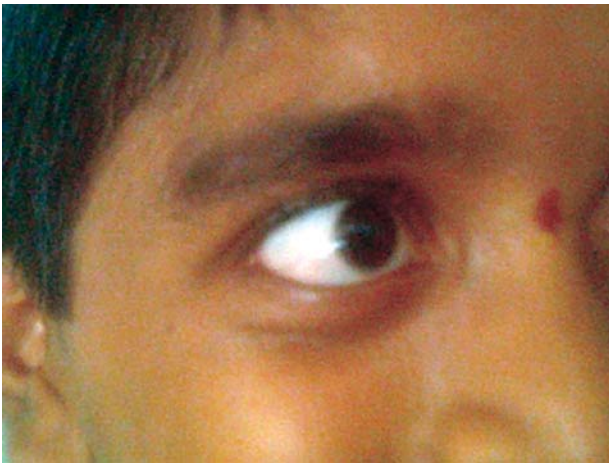


Figure 1B. Photograph of the patient showing complete resolution after anti-tuberculosis treatment.

DISCUSSION

Episcleritis is a benign and bilateral condition and underlying systemic cause is found in a minority of cases.³ It is an inflammation of the episclera, the loose highly vascular connective tissue that lies deep to Tenon capsule and superficial to the sclera.^{5,6} It is caused by exogenous inflammatory stimuli, mostly immunological and rarely by infections, such as herpes or tubercular.⁷⁻¹¹ Underlying systemic cause is found in a few patients including connective tissue disorders like rheumatoid arthritis.¹⁰ A biopsy is not advised as it aggravates eye condition. An increase in ocular inflammation following tuberculin test was once considered as presumptive evidence of tuberculous aetiology.¹¹ Montoux test may be positive but does not prove the diagnosis. Kotake *et al*¹³ established definite diagnosis using polymerase chain reaction method in these patients. They used a sequence for the coding of MPB 64 protein that is specific for *Mycobacterium tuberculosis*.^{13,14} Diagnostic

tests like hemagglutination, flocculation and agar gel methods to detect TB have been disappointing.¹⁵ Topical vasoconstricting agents were not used to avoid rebound phenomenon. Topical corticosteroids were avoided because of a risk of steroid glaucoma and cataract. Evidence of TB elsewhere, as in our case, is presumptive evidence of tubercular aetiology and was confirmed by therapeutic response to ATT. Early diagnosis and treatment is necessary to prevent a decrease in visual acuity. Delayed treatment of episcleritis leads to cataract and macular changes and optic disc changes.

Evidence of episcleritis should lead to a search for evidence of active tubercular disease in other parts of the body. Early diagnosis is necessary to start correct treatment to ensure complete response without serious complications.

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