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Pathology

Primary Tuberculosis of the Eye Lid – A Rare Manifestation, Case Report in a Tertiary Care Medical College & Hospital

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Abstract **Case Report**

We present a case of cystic lobulated swelling on upper and lower lid margin in a 45 years old woman. No other local or systemic features were associated with it. An incisional biopsy was performed under local anaesthesia. The histopathological examination revealed epithelioid cell granulomas and multiple Langhans type giant cells (Tubercular).

Keywords: cystic lobulated swelling, incisional biopsy, anaesthesia, tuberculosis.

1. INTRODUCTION

Ocular manifestations of tuberculosis are not uncommon in India but tuberculosis of the eyelid is rather rare. Only a handful of cases have been reported in the literature, with the primary type being very unusual. Eyelid involvement is almost always secondary to the orbital involvement and it is often seen in the form of a drainage sinus [Liaquat J, 2007].

Herein, we present an unusual case of granulomatous lesion in eyelid.

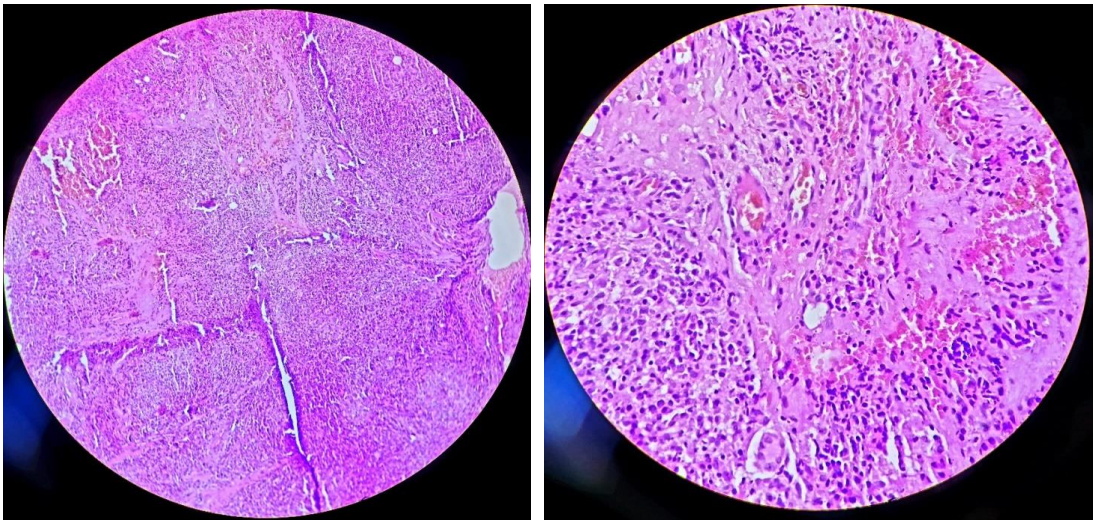
2. CASE PRESENTATION

A 45-year-old woman who belonged to middle socioeconomic class presented with swelling in upper and lower eyelid. The swelling was observed 2 months back it-self and it had gradually increased in size. There was no history of trauma over site. There was no history of tuberculosis in the family, nor was there any definite history of exposure to any tuberculosis patient.

On examination, a freely mobile, non-tender, cystic lobulated swelling on upper and lower eyelid was seen which measured 1x0.5cm. There was no congestion or restriction of the ocular movements. The best corrected visual acuity was 6/6. Both the eyes had normal intraocular pressure. The sac, cornea, iris, pupil, lens and the fundus were normal. The other eye and the eyelid were normal. On general examination, the patient was found to be normal and healthy.

An excisional biopsy of the swelling was done under local anaesthesia and it was subjected to a histopathological examination.

The H & E stained sections showed characteristic tubercles with central areas of caseation, which were surrounded by epithelioid cells, multinucleated Langhan's type giant cells and a cuff of mature lymphocytes and plasma cells.



(a) **(b)**

Figure 1: Section shows central necrosis with presence of epithelioid cells, Langhan's type giant cells and cuff of lymphocytes (H & E stained 100x); (b) Section shows epithelioid cell granuloma (H & E stained 400x)

3. DISCUSSION

The definition of primary ocular tuberculosis is variable. Some authors use it to describe an ocular disease in the absence of a systemic involvement, while others use to describe it as a disease in which the eye is the initial port of entry of mycobacterium tuberculae into the body [Madge SN *et al.*, 2008]. It is unlikely that tuberculosis of the eyelid may occur as a primary lesion per se. The systemic tubercle bacilli can disseminate through vascular spread, giving rise to infections in almost every organ, including the eye. Orbital involvement by tuberculosis, even in endemic areas, is rare. The entry of the tubercle bacilli into the human-body can occur via the primary or the secondary routes. Cases of upper eyelid mycobacterial infection following oriental blepharoplasty [Chen SH *et al.*, 2001] had been reported earlier; however, a primary involvement is rare. The present case is an unusual manifestation of tuberculosis. Our patient presented with a painless, isolated eyelid swelling, which is extremely uncommon. A presumptive diagnosis is commonly based on the finding of acid fast bacilli during a microscopic examination of the diagnostic specimen. A definitive diagnosis is dependent on a positive culture of the organism from the diagnostic specimen, which is time consuming. One of the most promising diagnostic techniques is the amplification and the detection of specific segments of the DNA of the tubercle bacilli by PCR, which is useful in diagnosing the disease with a high sensitivity and specificity. The disease usually starts as a small nodule under the epithelium and when it occurs near the lid margin, it may resemble a stye or a chalazion. The nodule may ulcerate after some time and spread locally in an irregular fashion and it is often accompanied by pain and mucoid or at times, a purulent discharge [Lynn, WA, 2004]. The disease is very insidious, and if it is left untreated, it can involve both the eyelids, and the resultant lid complications like ectropion can endanger the eye itself [Sahu GN *et al.*, 1998].

In the present case, a possibility of chalazion was ruled out clinically, since the swelling was freely mobile. Ocular tuberculosis may present without demonstrable active tuberculosis elsewhere in the body. The most common ocular manifestations are anterior uveitis and choroiditis or chorioretinitis. Other intraocular manifestations which are attributed to TB include retinal vasculitis and Eales' disease [Sheu SJ *et al.*, 2001]. The diagnosis can be difficult and it may necessitate an orbital biopsy in which acid-fast bacilli (AFB) and the characteristic histopathology may be seen. The growth of Mycobacterium tuberculosis from such a specimen remains the gold standard for the diagnosis of TB. PCR- based tests of the pathological specimens have been proven to be useful. Ocular tuberculosis usually occurs in apparently healthy individuals who usually show evidence of only an old, healed or benign tuberculous lesion. It has been rarely observed in patients with active pulmonary disease. Both ocular and orbital tuberculosis are usually unilateral [Shivananda PG *et al.*, 1983].

CONCLUSION

Tuberculosis should be considered in the differential diagnosis of a chronic painless eyelid swelling, especially in the Indian background, where the disease still remains a main cause of morbidity. The diagnosis of the tuberculous pathology is important in order to start a specific therapy.

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