

## Chronic Ulcerative Eyelid Lesion: A Rare Manifestation of Tuberculosis

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### Abstract

Any organ system in the body can be affected by tuberculosis. While pulmonary tuberculosis is the most common presentation, extrapulmonary tuberculosis including ocular tuberculosis is also an important clinical problem. Most commonly, ocular tuberculosis presents as anterior uveitis or choroiditis which is caused either by hematogenous infection or hypersensitivity after another organ infection. Eyelid involvement by tuberculosis is mostly secondary to orbital tuberculosis and often presents as a draining sinus. Isolated eyelid tuberculosis is however uncommon. We present the case of a 6 year old female with eyelid tuberculosis presenting as chronic non healing skin ulcer.

**Keywords** Tuberculosis; Extra pulmonary tuberculosis; Orbital tuberculosis; Ocular tuberculosis; Eyelid tuberculosis

### Introduction

Tuberculosis is a multisystem infectious disease caused by *Mycobacterium tuberculosis*. Tuberculosis has a large spectrum of extra pulmonary manifestations including ocular tuberculosis. Only 1-2% of patients with systemic manifestations of tuberculosis present with simultaneous ophthalmic manifestations [1]. The most common presentation of ocular tuberculosis is anterior uveitis or choroiditis [2] caused either by hematogenous infection or hypersensitivity after another organ infection. Eyelid tuberculosis is a relatively uncommon presentation of ocular tuberculosis [3,4]. It may be primary or secondary, out of which primary is more uncommon. Eyelid involvement is mostly secondary to orbital tuberculosis and presents as a draining sinus. We present the case of a 6 year old female patient with isolated eyelid tuberculosis presenting as chronic non healing skin ulcer.

### Case Presentation

A 6 year old female patient presented to the hospital with chief complaints of swelling over left eyelid for 4 months. There was no associated history of pain, redness or increase in temperature of overlying skin. There was history of Incision and drainage of the swelling done elsewhere 25 days before presentation following which it developed into a pus discharging sinus. The patient was on Tab Cefixime since then with no improvement. There was no history of Tuberculosis or TB contact. On examination, a bone deep excavated skin ulcer of dimensions 13 × 9 mm was present below left eyebrow with surrounding excoriated skin (Figures 1 and 2).

There was no tenderness on palpation and no oozing of blood or pus from the lesion. There was a single, mobile, enlarged, non-matted, palpable, non-tender deep cervical lymph node on left side of 1 × 1 cm in size. Extra ocular movements were full and free in all gazes. There was no lagophthalmos. There was a well-defined swelling over left

scapular region, 7×9 cm in size, soft in consistency, non-tender with no overlying skin changes (Figure 3).



Figure 1: Isolated eyelid tuberculosis.



Figure 2: Bone deep excavated skin ulcer.

Routine blood investigations revealed Haemoglobin to be 9.6 gm% and ESR to be 60. Montoux test was read to be 33×39 mm at 48 hours.

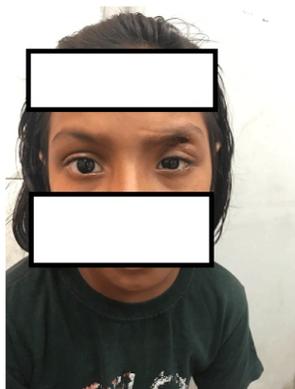


**Figure 3:** Swelling over left scapular region.

Chest X ray revealed left hilar prominence of vascular origin. FNAC from left scapular swelling was negative for acid fast bacilli. CECT head and orbit revealed a well-defined lesion of soft tissue attenuation measuring  $13 \times 8 \times 10$  mm showing heterogenous post contrast enhancement involving left upper eyelid and extending superiorly eroding the left frontal bone and lateral wall of orbit.

No intraocular or intracranial extension was seen. The above findings were suggestive of chronic inflammatory etiology likely tubercular osteomyelitis of the frontal bone. Skin biopsy from the skin ulcer was taken. The superficial dermis showed epitheloid cell granulomas with chronic lymphoplasmacytic infiltrate in the dermis. Ziehl Neelson stain for Acid fast bacilli was positive in the skin biopsy sample.

The patient was started on Category 1 ATT according to pediatric dose. On 2 weeks follow-up, the excoriation surrounding the ulcer had decreased and the skin ulcer started showing signs of healing (Figures 4 and 5).



**Figure 4:** Decreased excoriation surrounding the ulcer.



**Figure 5:** Signs of skin ulcer healing.

## Discussion

Cutaneous tuberculosis is frequently misleading and challenging, as it mimics a wide differential diagnosis. Eyelid involvement by tuberculosis is most of the times secondary to orbital involvement and often seen in the form of drainage sinus, scarring of the eyelids may lead to cicatricial ectropion, lagophthalmos or adhesion of eyelid structures to the underlying orbital bones, isolated involvement without orbital or systemic involvement is extremely uncommon [4,5]. We present a case of childhood TB in an immunocompetent female child manifesting as a chronic skin ulcer. In our case, pyogenic infection was ruled out because of absence of response to broad spectrum antibiotics. Treatment was started in both cases depending on the tuberculin skin test, histopathology, and chronicity of lesions showing no response to broad-spectrum antibiotics. Multiplicity of lesions and multifocal disseminated involvement in scrofuloderma and lupus vulgaris is common. However, our patient had an isolated skin ulcer. Response to anti TB treatment was further supportive of the diagnosis.

## Conclusion

In conclusion, although the incidence of cutaneous TB is rare, it should be considered in patients presenting with suggestive skin lesions. Early diagnosis and initiation of treatment are important to achieve complete recovery and avoid deformities. Increased awareness of TB is highly recommended.

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