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CASE REPORT

Tubercular Dacryocystitis: A Quirky Diagnosis!!

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ABSTRACT

Tuberculosis of the lacrimal sac is a rare condition even in a place considered endemic to tuberculosis. It is usually suspected with either local or systemically present tubercular lesion or with a history of recurring failure of lacrimal drainage procedures. Failure to identify the ailment may have devastating consequences. We present a case of tubercular dacryocystitis and discuss its clinical spectrum.

Keywords: Epiphora, Eye swelling, Lacrimal, Tuberculosis.

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INTRODUCTION

Tuberculosis of the lacrimal sac is a rare condition. It is usually suspected with either local or systemically present tubercular lesion or with a history of recurring failure of lacrimal drainage procedures. We report the case of a 42-year-old male with tubercular dacryocystitis presenting with swelling in medial canthal region and epiphora and discuss the issues faced by us before arriving at the diagnosis.

CASE REPORT

A 42-year-old male presented to the ear, nose, and throat outpatient department with chief complaints of watering from left eye and a gradually increasing swelling near the left medial canthus for 1 year. The patient did not have pain in the swelling or any visual problem or any nasal complaints. His past medical history also did not suggest anything relevant. On examination, left telecanthus was present with slight fullness in left lacrimal sac region. It was indurated but nontender. There was slight hyperpigmentation near left medial canthus (Fig. 1). Vision and endoscopic nasal examination were normal. There was no significant lymphadenopathy.

Contrast-enhanced computed tomography (CT) of nose and paranasal sinuses revealed a well-circumscribed soft tissue mass causing enlargement of left lacrimal sac with no evidence of calcification or necrosis within the lesion (Fig. 2). With a tentative diagnosis of malignancy in mind, lacrimal sac was opened endonasally after removing lacrimal bone and biopsy was taken. Histopathologic examination showed inflammatory granulomatous lesion with caseation suggestive of tuberculosis (Fig. 3). Acid fast bacilli were not seen but nucleic acid amplification test (NAAT) came positive for *Mycobacterium tuberculosis*.

Laboratory investigations revealed hemoglobin of 13 gm/dL and an erythrocyte sedimentation rate (ESR) of 59 mm/hour. The tuberculin skin test (carried out with 1 TU of purified protein derivative and read after 72 hours) was positive for tuberculosis with an induration of 12 mm. Chest radiograph was normal.

With the ancillary support of a positive Mantoux test and raised ESR to the histopathological report of a granulomatous caseative necrosis and positive NAAT, a diagnosis of tubercular dacryocystitis was made and the patient was started on antitubercular therapy consisting of isoniazid (H), rifampicin (R), pyrazinamide (Z) and ethambutol (E) for initial 60 days. He was given isoniazid and rifampicin for 4 months subsequently. As a result of this treatment, medial canthal swelling resolved.

DISCUSSION

Tuberculosis of orbit is a very uncommon occurrence, even in places where tuberculosis is considered endemic. Ocular tuberculosis affects 1.4% of patients with pulmonary involvement.[1] It can occur either as a result of hematogenous spread from a distant site or by a direct extension from an adjoining site like sinus or lacrimal gland. It may also occur due to incidental contamination of conjunctiva with the tubercle bacilli and subsequent passage of the same to lacrimal sac with tears.[2] Primary infection of the orbit is rarer in comparison to its secondary involvement as a result of infection of gland, sinus, or skin.

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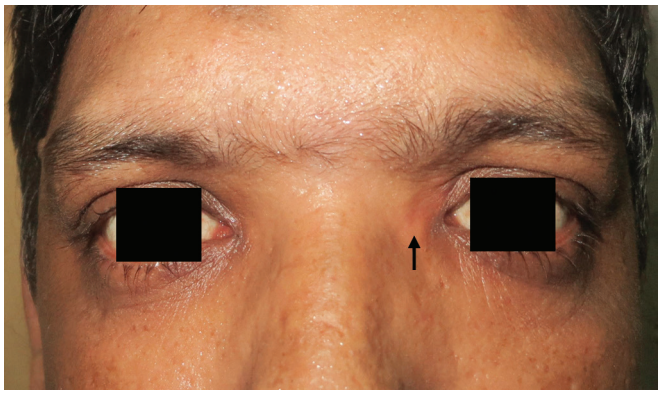

Fig. 1: Clinical photograph of the patient showing fullness in the left medial canthal region along with skin discoloration (indicated by black arrow)

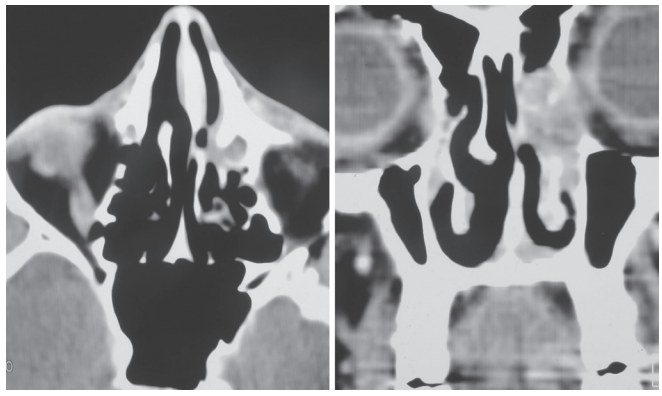

Fig. 2: Axial and coronal sections of contrast-enhanced CT scan of nose and paranasal sinuses show a well-circumscribed lesion in left lacrimal sac with widening of the nasolacrimal duct

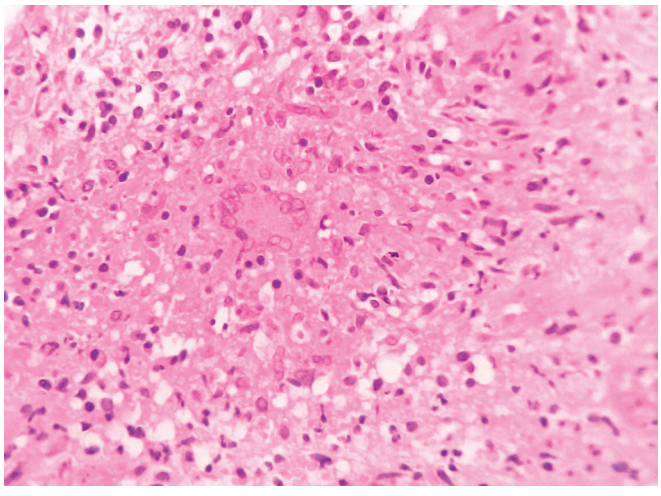

Fig. 3: Histological picture showing multiple caseating and noncaseating epithelioid cell granulomas with Langhans giant cells (400×, hematoxylin and eosin)

Dacryocystitis is generally a result of primary nasolacrimal duct obstruction where inadequate drainage of tears leads to swelling of lacrimal sac and watering from eyes. Secondary causes of dacryocystitis like infections, inflammations, and malignancies need to be considered when there are recurrent attacks of inflammation of lacrimal sac despite drainage procedures. However, in the absence of active systemic tuberculosis or any history of recurrent failure of lacrimal drainage surgery, the diagnosis of tubercular dacryocystitis becomes a difficult one. The diagnosis is based on positive tuberculin test, caseating granulomatous inflammatory lesions on histopathological examination of tissue, demonstration of acid fast bacilli or positive culture of *M. tuberculosis*. In our case, no focus of lesion could be demonstrated in the vicinity on external and nasal endoscopic examination or in the body anywhere else. Hence, a diagnosis of primary dacryocystitis was established.

The initial presentation of tubercular dacryocystitis is usually in the form of nonspecific complaints like watering from eyes, hence the patient generally postpones seeking medical advice for the same. Because of the benign nature of the symptoms, the clinician also does not think on the lines of a potential secondary cause.

As the reports in literature suggest, all the cases of tubercular dacryocystitis were established either in the presence of overlying skin involvement or on extensive search for tuberculosis in adnexa for repeated failure of lacrimal drainage surgeries.[3-6] In our case, the presence of swelling in the medial canthal region prompted us to get a CT scan done to rule out the presence of agger nasi that may be compressing the sac drainage or a space-occupying lesion in the sac. The finding of mass in the lacrimal sac impelled us to take a biopsy and thereby arrive at a diagnosis which was corroborated by positive Mantoux test and raised ESR.

The Revised National Tuberculosis Control Program uses short-course chemotherapy given intermittently – thrice weekly under direct observation (DOTS) for both pulmonary and extrapulmonary tuberculosis patients where four drugs (H, R, Z, and E) are given in intensive phase for 2 months followed by 4 months of continuation phase where two drugs (H, R) are given.

The case underlies the importance of having a high index of suspicion for tuberculosis as a cause of dacryocystitis along with other causes of epiphora. Often, the only way to confirm the existence of tuberculosis in the eye or adnexa is to use corroborative evidence, usually in the form of a positive tuberculosis test or through awareness of a family history of tuberculosis. It is essential to be aware of this aspect, especially in endemic areas so that the treatment can be initiated early. If underlying tuberculosis remains untreated, it can lead to frequent unsuccessful visits of the patient as well as the danger of infection spreading into the eye proper leading to potential loss of vision.

REFERENCES

1. Cutrufello NJ, Karakousis PC, Fishler J, Albini TA. Intraocular tuberculosis. Ocul Immunol Inflamm 2010 Aug;18(4): 281-291.
2. Sigelman SC, Muller P. Primary tuberculosis of the lacrimal sac. Arch Ophthalmol 1961 Mar;65(3):158-160.
3. Al-Malki AF, Issa TM, Riley F, Karcioglu ZA. Nasolacrimal tuberculosis in a patient with conjunctivodacryocystorhinostomy. Ophthal Plast Reconstr Surg 1999 May;15(3): 213-216.
4. Abrol R, Nagarkar NM, Mohan H, Srivastava M. Primary bilateral tuberculous dacryocystitis with preauricular lymphadenopathy: a diagnostic difficulty of recent times. Otolaryngol Head Neck Surg 2002 Feb;126(2):201-203.
5. Wong SC, Healy V, Olver JM. An unusual case of tuberculous dacryocystitis. Eye (Lond) 2004 Sep;18(9):940-942.
6. Bansal S, Sahoo B, Garg VK, Singh S. Periocular lupus vulgaris to lacrimal sac tuberculosis: a rare presentation with emphasis on magnetic resonance imaging in localizing the primary focus of infection. Indian J Dermatol Venereol Leprol 2013 May-Jun;79(3):425-427.