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Case Report

Orbital tuberculosis an interesting case report

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ABSTRACT

Tuberculosis can affect any organ. Orbital tuberculosis is very uncommon. The involvement of adnexa of orbit especially the eyelid is very rare even in endemic region. Many of the patients with orbital Tuberculosis doesn't have concomitant involvement of any other system by tuberculosis. We report a 13-year-old girl presented with complaints of painless progressive swelling on right upper eyelid for six months. The child didn't have any other septic foci. The child was planned for excisional biopsy which confirmed the diagnosis of Koch disease by histopathology and RTPCR and child responded well with ATT. The case being reported to insist on earlier diagnosis and prevent further morbidity.

Keywords: Orbital tuberculosis, Non healing ulcer, Eyelid

INTRODUCTION

Tuberculosis is still one of the chronic illnesses causing morbidity and mortality in developing countries. Orbital Tuberculosis is a rare manifestation even in endemic countries. Orbital tuberculosis includes infection of the intraocular structures as well as the adnexa like eyelid and lacrimal gland. Primary ocular tuberculosis of the adnexa is very rare. may occur due to hematogenous spread or direct ocular infection or by hypersensitivity reaction to TB antigens.[1] The disease is usually unilateral, progressive in nature occurring more common in pediatric age group.[5] The lateral wall of orbit involvement is usually by hematogenous spread whereas medial walls involvement is by spread of infection from adjacent structures.[6,7] Diagnosis of orbital tuberculosis is made on the presence of associated systemic tuberculosis, characteristic histopathological findings of caseating granuloma, or demonstration of acid-fast bacilli in the histopathological sections by Ziehl-Neelsen staining. Prompt diagnosis by polymerase chain reaction and radiological investigations aid in early treatment and reduce disease burden to the community. The mode of treatment proposed is wide surgical debridement of the involved tissue with anti-tuberculous chemotherapy for 18 months after confirming the

CASE REPORT

A 13-year-old girl presented with complaints of painless, progressive swelling above the right upper eyelid for past six months with no restriction of eye movement or visual acuity disturbance. There was history of serous discharge from the swelling and drainage of the same once. Patient had no contact history and febrile episodes.

On local examination there was a non- tender fullness on the lateral aspect of supraorbital rim on right side with a discharging sinus (Figure 1). There was no restriction in eyeball movement and visual acuity was 6/6. No significant lymphadenopathy and general physical examination were normal. Her hemogram was normal with ESR of 12 mm/hr. Her test for HIV was negative. Her chest X-ray revealed no evidence suggestive of tuberculosis. Her CT scan of paranasal sinus (Figure 2) revealed cystic defined lesion 2×2 cm with mild contrast enhancement with no infiltration of right lateral rectus. Periostitis of the right greater wing of sphenoid and

zygomatic bone and erosion of the greater wing of sphenoid.

Patient was planned for excision biopsy. Histopathological reports correlated with Koch disease findings and RTPCR gene expert test for tuberculosis in the tissue excised detected mycobacterium tuberculosis which was resistant to rifampicin. Patient was started on mono-drug resistant ATT with isoniazid, pyrazinamide and ethambutol for 18-months and responded well.

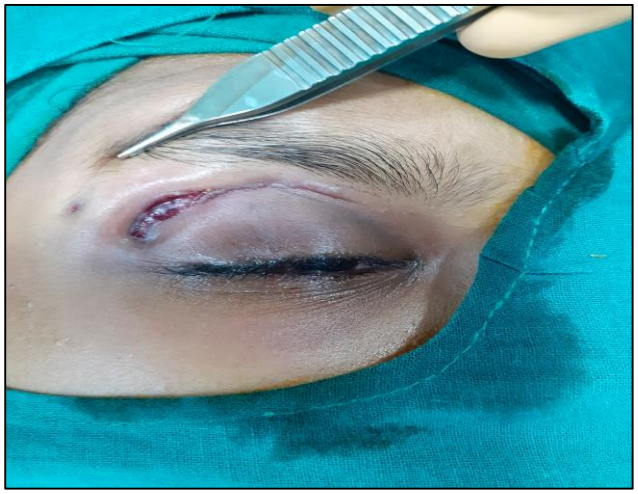

Figure 1: Right supraorbital rim showing non healing ulcer with discharging sinus.

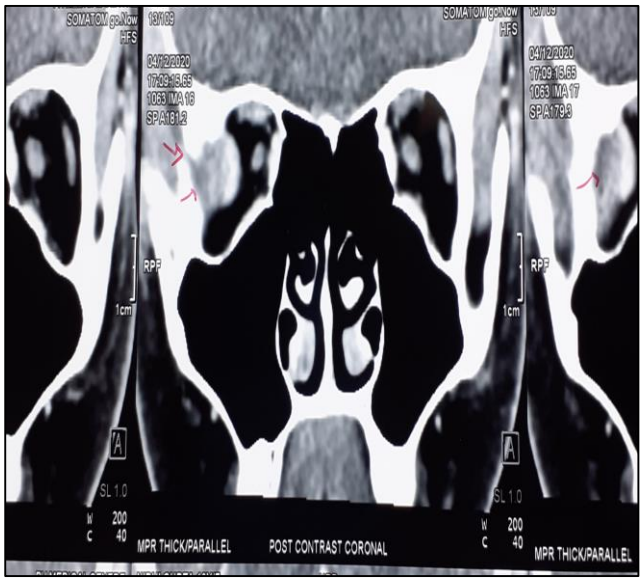

Figure 2: CT PNS showing periosteitis of right greater wing of sphenoid and cystic well-defined lesion without infiltration of lateral recti right.

DISCUSSION

Based on WHO global TB report of 2020 10 million fell ill with TB in 2019, out of which India accounts for 26% of the global TB load. Extrapulmonary tuberculosis case load in the year 2019 world-wide was 16%.[2] The first case of orbital tuberculosis was reported by Abadie in 1851.[3] Orbital tuberculosis is extremely rare. The disease is more common in children with a female preponderance.

Orbital tuberculosis can be grouped into two categories namely primary orbital tuberculosis and secondary orbital tuberculosis. In primary orbital tuberculosis, there is no systemic lesions and the ocular infection is localized only to conjunctiva and cornea. Secondary orbital tuberculosis usually results from hematogenous spread or spread from neighboring paranasal sinuses. Intra orbital tuberculosis present as two forms tubercular periostitis and intraocular space occupying lesions.

Based on the site of involvement orbital tuberculosis can be classified into five types.[4] They are as follows 1) classical orbital periostitis where patient presents with erythema and edema of the lids and conjunctiva usually the outer orbital wall. this type is most common presentation, 2) Orbital soft tissue tuberculoma without bony destruction, 3) orbital tuberculosis with evidence of bony involvement, 4) spread from paranasal sinuses, 5) lacrimal gland and adnexal involvement. Our case fell in the type 3 where bony involvement was demonstrated in the computerized tomography scan of paranasal sinuses.

Diagnosis of the disease is based on history, recovery of acid-fast bacilli from the eye smears or from the tissue excised. As orbital tuberculosis falls in paucibacillary type demonstration in smear will be relatively less and less infectious. High degree of clinical suspicion in a non-healing wound is the key to early diagnosis. Presence of at least three of the following features favors the diagnosis of ocular TB (i) suggestive clinical picture, (ii) exclusion of other etiology, (iii) positive tuberculin skin test, (iv) response to antitubercular treatment and (v) present or past history of TB.[3]

Treatment of ocular TB falls in category I and category III of RNTCP regime with ancillary support from corticosteroids if necessary. In our case the child presented to us after 6 months which delayed the treatment to be initiated and was detrimental to the child.

Therefore, in ocular TB which usually presents with non-specific symptoms and atypical nature a high index of suspicion to be kept in mind to start the treatment and prevent long term complications.

CONCLUSION

The incidence of orbital TB is rare but still to be kept as differential diagnosis whenever an atypical orbital lesion or non-healing ulcer occurrence is diagnosed and carefully evaluated to decrease the morbidity of the disease and provide a good prognosis. As delayed diagnosis and sequelae of the disease can change the quality of life for the patient.

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