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A RARE CASE REPORT OF BILATERAL TONSILLAR TUBERCULOSIS WITH REVIEW OF LITERATURE

Pathology

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ABSTRACT

Tuberculosis ranks amongst the leading infectious disease of morbidity/ mortality particularly in poor and developing countries. Tubercular tonsillitis, not associated with tuberculosis of lung, is rather uncommon. A young female attended outpatient department with complaints of difficulty and pain in swallowing since one month, insidious in onset, progressive in nature, associated with high grade fever, only relieved on medication. On oral examination there was bilateral tonsillar hypertrophy grade III and anterior pillar congestion.. Bilateral tonsils were removed and sent for histopathological examination. The tuberculosis of tonsil may be primary or secondary. The index case did not have any evidence of HRCT tuberculosis elsewhere in the body on clinic-imaging investigation including HRCT of lungs. Biopsy revealed granulomatous inflammation with caseation, positive for mycobacterial bacilli on smear examination and also by CBNAAT. Since the clinical presentation of tuberculosis may not be diagnostic, biopsy and evaluation of sample by molecular techniques in patients with high index of suspician establish the diagnosis so that definitive curative treatment may be instituted.

KEYWORDS

Tonsils, Tuberculosis, Ziehl-Neelsen staining

INTRODUCTION:

In the oral cavity the tuberculosis is not a common occurrence and it may present as either primary or secondary. In oral cavity, palate and tongue are the sites were TB commonly occurs but tubercular tonsil is a rare entity. The incidence of tubercular tonsil is less than 5%.

Extrapulmonary tuberculosis is a major cause of overall tubercular morbidity. Among extra pulmonary tuberculosis, lymph node tuberculosis is most common whereas other systems includes like CNS, abdomen, pleural, genitourinary and pericardium[1].

Although swallowing of a sputum containing bacilli in pulmonary tuberculosis should be a common phenomenon exposing tonsils along with other organs, these patients seldom develops tubercular tonsillitis due to the following reasons.[5]

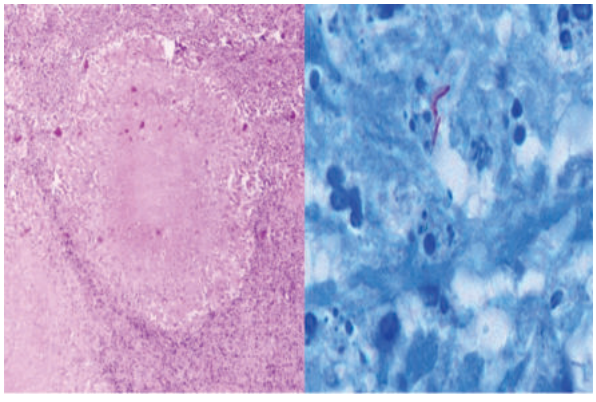
- The antiseptic and cleaning properties of the saliva
- The saprophytes present in the oral cavity make the colonization of tuberculous bacilli difficult
- Thickness of the tonsillar mucosa provides resistance to the infection by tubercle bacillus.
- Tonsils are inheritedly resistant to the TB

For the tuberculosis of tonsils the predisposing factors are recent tooth extraction, unhygienic dental condition and leukoplakia. Patient presents clinically with enlarged tonsils, sore throat, cervical lymphadenopathy, white patches, painful ulcers, productive cough, dysphagia with or without the presence of constitutional signs and symptoms of tuberculosis.[5,6,7] Out of all the most common presentation is sore throat.

We here in, report a rare case of primary tonsillar tuberculosis in young female to increase awareness among the clinicians that tonsillar tuberculosis is still prevelant.

Case History:

25 year old female presented to the department of ENT, SGT Hospital with complaints of difficulty and pain in swallowing since one month, insidious in onset, progressive in nature, recurrent upper respiratory tract infections associated with high grade fever, relieved on medication. Physical examination- Patient was febrile and had bilateral cervical lymphadenopathy. Her complete blood count showed TLC -13,000/cumm, HB -11gm% and ESR was also raised. Montoux test was positive. X-ray chest and all other investigations were normal. FNAC of bilateral cervical lymph nodes showed features consistent with reactive hyperplasia. ZN stain for acid fast bacillus was negative. On oral examination bilateral tonsillar hypertrophy grade III and anterior pillar was congested. Bilateral tonsils were removed and sent for histopathological examination. Biopsy revealed granulomatous inflammation with caseation ,positive for mycobacterial bacilli on smear examination. Features were in favour of tuberculous tonsillitis. The patient was given ATT after tonsillectomy and was recovering well on follow up.



Caseating epitheloid cell granuloma and Ziehl-Neelsen stain for acid fast bacilli was positive (40x)

Discussion and Review of literature:

The lesions can be primary or post-primary and maybe caused by bovine. Swallowing of infected sputum in the cases of pulmonary tuberculosis may cause tonsillar tuberculosis. Consumption of unpasteurized milk may result in primary tuberculous tonsillitis. The common presenting features include recurrent respiratory tract infection, sore throat, cervical lymphadenopathy, throat pain, difficulty in swallowing.

These patients must always be thoroughly investigated to rule out focus of tuberculosis elsewhere in the body particularly in lungs.

The diagnosis of tuberculosis is dependent on demonstration of tubercular bacilli/its components and evidences of immune response elicited against the same in addition to characteristic clinico-imaging

presentation. Advent of molecular techniques like CBNAAT, TRUNAAT performed on samples obtained by FNAC, swab have greatly enhanced the diagnostic accuracy particularly in sites where direct smear for acid fast bacilli is negative and clinic-imaging presentations are non-specific as in bilateral tonsillitis.

Differential diagnosis includes- traumatic ulcer, apthous ulcer, malignancy, actinomycosis, Plaunt-Vincent tonsillitis, midline granuloma, Wegner's granulomatosis etc.[8,9,10]

Treatment includes anti-tubercular drugs including isoniazid, rifampicin, pyrazinamide and ethambutol for two months, followed by isoniazid and rifampicin foe four months[8.]

Bilateral tuberculous tonsillitis has been reported as cases as summed up in the table 1.1

Table 1.1 Cases of Tubercular tonsillitis- Review of Literature

Author	Age/Sex	Presenting complaint	Physical Examination	Investigation	Radiological findings	Microscopy	Treatment
Dhanasekar et al2	10years Male	Change in voice and throat pain, insidious onset, gradually progressive, exagerated by cold food, relieved on taking medication. Past history-Mouth breathing associated with snoring, cough with mucoid discharge,on and off breathlessness	Vitals-within normal limit, General examination- afebrile, Cyanosis+, icterus+, clubbing+, lymphadenopathy+	CBC, Liver and renal function test are within normal limit. Viral markers - negative	Bilateral lung fields clear , CT Thorax - Normal	multiple epithelioid granulomas along with langhans giant cells with few inflammatory infiltrates observed in the background. Caseous necrosis also noted.	Tonsilectomy and ATT
Prasad et al1	10years Male	C/O- URTI X 2-3 times every month for last 6 years,Cough+ , Running nose+ associated with hyperthermia and dysphagia. Past history-mouth breathing+, Snoring+	Cervical lymphadenopathy+, Tonsils –enlarged-gradde 3, Congestion+	CBC, Liver and renal function test are within normal limit Mantoux test-positive	Chest X-ray – normal	B/L tonsils showed epithelioid epithelioid cell granulomas and Langhans giant cells , ZN stain- Positive for acid fast bacilli	Tonsillectomy and ATT
Das et al3	76Years Male	C/O of throat pain, difficulty and painful swallowing since 3 months H/0 loss of appetite present	Vitals-within normal limit, General examination- within normal limit	Low hemoglobin, Raised ESR	Chest X-ray - normal	Numerous epithelioid granulomas seen, langhans giant cells seen ,caseous necrosis+	Tonsilectomy and ATT
Kant et al4	55years Male	sore throat and difficulty in swallowing of solid food	oropharyngeal cavity showed an ulcer over anterior pillor of left tonsil about 8 × 8 mm in dimension.	-	Ultrasonographic and barium meal studies did not reveal any abnormality	presence of tubercular granuloma characterized by epitheloid cells, langhans type of giant cells and mononuclear inflammatory cells	Tonsilectomy and ATT
Balasubramanian et al5	53years Male	sore throat and difficulty in swallowing of solid food for past 2 months H/O weight loss, Decrease appetite, On and off cough associated with earache present	Ulcerative and eroded lesions present in oral cavity mainly involving bilateral pillars of left tonsil.	ZN stain for AFB- positive	X-ray chest: Revealed military mottling	Caseating necrosis along with granulomatous lesions, infiltrate by langhans and epithelial giant cells.	Tonsilectomy and ATT

CONCLUSION:

Tonsillar tuberculosis is extremely rare and might be suspected if the tonsils are enlarged and associated with cervical lymphadenopathy. Early detection and intervention is essential for cure. It is suggested that all the tonsils surgically removed must be subjected for biopsy to rule out granulomas. Additionally swabs maybe submitted for molecular techniques if tubercular tonsillitis is suspected.

REFERENCES:

1) Prasad P, Bhardwaj M. Primary tuberculosis of tonsils: a case report. Case reports in medicine. 2012 Jan 1;2012.
2) T Dhanasekar D, R Inba Shyamala D, Abdul Majeed Arshad D, Rajagopalan D. An interesting case of tonsillar tuberculosis in a 10-year-old boy. Journal of Clinical Tuberculosis and Other Mycobacterial Diseases. 2020 Aug;20.
3) Das A, Das SK, Pandit S, Basuthakur S. Tonsillar tuberculosis: a forgotten clinical entity. Journal of Family Medicine and Primary Care. 2015 Jan;4(1):124.
4) Kant S, Verma SK. Isolated tonsil tuberculosis. Lung India: Official Organ of Indian Chest Society. 2008 Oct;25(4):163.
5) Balasubramanian T. Secondary tuberculosis of tonsil case report and literature review. Online Journal of Otolaryngology. 2012;2(1).
6) Srirompotong S, Yimtae K, Srirompotong S. Clinical aspects of tonsillar tuberculosis. SOUTHEAST ASIAN JOURNAL OF TROPICAL MEDICINE AND PUBLIC HEALTH. 2002 Mar 1;33(1):147-50.
7) Gupta KB, Tandon S, Jaswal TS, Singh S. Tuberculosis of tonsil with unusual presentation. Indian Journal of Tuberculosis. 2001;48(4):223-4.
8) Selimolu E, Sütbeyaz Y, Çiftçiolu MA, Parlak M, Esrefo□lu M, Öztürk A. Primary tonsillar tuberculosis: a case report. The Journal of Laryngology & Otology. 1995 Sep;109(9):880-2.
9) Adiego MI, Millán J, Royo J, Dománguez L, Castellote MA, Alfonso JI, Vallés H. Unusual association of secondary tonsillar and cerebral tuberculosis. The Journal of Laryngology & Otology. 1994 Apr;108(4):348-9.
10) Williams RG, Douglas-Jones T. Mycobacterium marches back. The Journal of Laryngology & Otology. 1995 Jan;109(1):5-13.