



A RARE CASE OF INFERIOR TURBINATE TUBERCULOSIS

Dr. R. Jaya Durgadevi

Resident, Department Of Ent, Asram Medical College

Dr. Deeganta Mohanty*

Prof. Of Ent, Asram Medical College *Corresponding Author

KEYWORDS :

INTRODUCTION :

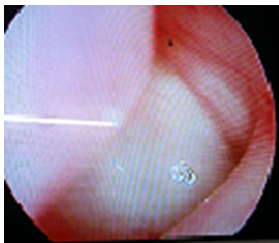
Tuberculosis is chronic granulomatous inflammation of lung (primary tuberculosis mainly concerned with lung). Though *Mycobacterium tuberculosis* infection can occur in all tissues of the body, pulmonary tuberculosis infection is overwhelmingly the most common type of infection representing approximately 80% of all cases of tuberculosis (TB)¹. Among the extrapulmonary tuberculoses, the most common manifestation is lymphadenitis².

Tuberculosis of otorhinolaryngeal region is an uncommon, but not a rare, clinical problem. The commonest otorhinolaryngeal manifestation of TB is laryngeal tuberculosis excluding cervical lymphadenitis³. Previous reports state that around 25–30% of patients with otorhinolaryngeal TB have concomitant pulmonary TB⁴.

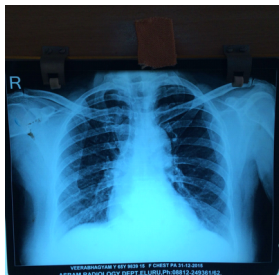
There are some instances where we observe extrapulmonary TB as primary within bones, joints, salivary glands, pharynx, ear & central nervous system. Sinonasal TB presenting as granuloma over inferior turbinate & it is presented due to its rarity.

CASE REPORT :

A 65yr old female patient visited to outpatient clinic with Right sided nasal obstruction since 1 month. She had accompanying symptoms like recurrent sneezing episodes H/o associated headache involving right side, blood stained nasal discharge occasionally & not relieved by medication. Anterior rhinoscopy revealed deviated nasal septum to left side, right nasal cavity revealed growth involving lateral wall of nose. On probing hard in consistency & probe can be passed between septum & growth. It seems to be arising from anterior end of inferior turbinate, Its not bleeding on touch. Endoscopic examination showed pinkish red growth involving anterior end of inferior turbinate & rest of examination was normal



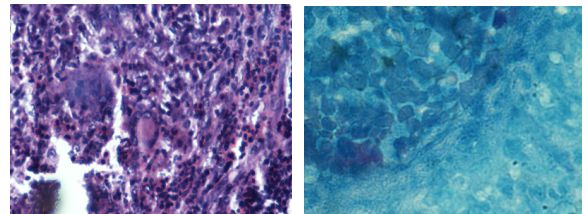
Results of all routine investigations including chest x ray are unremarkable.



Patient is posted for endoscopic excision of nasal mass under local

anesthesia, mass excised and specimen sent for histopathological examination

HPE : revealed sinonasal tuberculosis



DISCUSSION:

Tuberculosis is a chronic granulomatous inflammation of lung with its primary in it. sinonasal tuberculosis is a rare entity & may be of primary or secondary variety. Sino-nasal Tuberculosis constitutes 5–6% of Head & Neck tuberculosis⁵. Primary sinonasal TB is rare due to self protection functions of nose as ciliary movement, bacterial secretion and mechanical vibrissae. Main mode of transmission via droplet infection.

Usually 3 types of pathology is involved

(i) Mucosal involvement leading to formation of polyps with minimal pus discharge, this type is more common; (ii) bony involvement and fistula formation with abundant discharge of acid-fast bacilli (AFB); this type can lead to midfacial defect; (iii) hyperplastic type has granuloma formation and mimics a malignancy⁶. If not treated early, it can lead to complications like brain abscess and deterioration of vision⁷.

The risk of acquiring infection with mycobacterium tuberculosis is determined by exogenous factors whereas the risk of developing disease after infection depends on the endogenous factors such as Innate susceptibility, level of function of cell mediated immunity. Incidence of extrapulmonary TB is gradually increasing mainly due to human immunodeficiency virus co-infection⁸

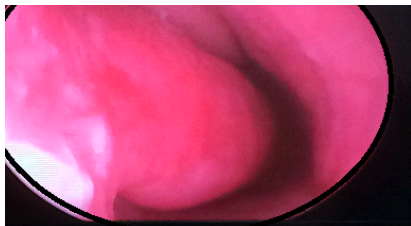
Tuberculous involvement of the nasal cavity usually appears as a rapidly growing ulcer or tumor mass in the region of the quadrangular cartilage of the nasal septum. Frequently, a septal perforation develops, which must be differentiated clinically from other granulomatous lesions or tumors. The anterior portions of the inferior turbinates are frequently involved in both the airborne and regurgitation varieties of the disease. Tuberculosis rarely appears in the posterior nares & the nasal floor is almost always spared

Genric A et al (1992) reported two cases of nasal tuberculosis in elderly, who presented with nasal obstruction. The symptoms of sinonasal tuberculosis may mimic other rhinosinusitis⁹. Vrat V et al (1985) pointed out that maxillary sinus tuberculosis has rarely associated with carcinoma which is of significance as a prognostic indicator¹⁰.

A 9 month three drug protocol has been recommended. Before chemotherapy was introduced, cautery of nasopharyngeal or nasal

ulcerations was recommended for pain relief coupled with a regimen of strict nasal hygiene to minimize mucosal destruction. The diagnosis of primary nasal tuberculosis in our case was made by demonstration of AFB and typical caseating granulomas in the biopsy tissue from nose along with negative workup for tuberculous foci elsewhere in the body. Although culture of nasal or nasopharyngeal secretions for AFB may yield positive results, biopsy is usually required to establish the diagnosis¹¹.

Post operatively recovered from symptoms



The American thoracic society center disease control & prevention and infectious diseases society of America suggests that the basic primary treatment of pulmonary tuberculosis are also suitable to extrapulmonary tuberculosis so 6 to 9 months ATT recommended¹².

CONCLUSION :

sinonasal tuberculosis can be primary or secondary irrespective of immune status. Clinical suspicion is important when a patient presents with unusual clinical features, ATT medication & / cauterization, surgical debridement is the mainstay of the treatment.

Accordance of current TB incidence trends, it would be kept in mind of infectious disease specialist as well as ENT specialist to consider TB as a potential entity when encountering an unusual lesion in the nasal cavity¹³.

ACKNOWLEDGMENTS :

The author would like to thank DR. Deeganta mohanty, DR. Manaswini das for their support and intense encouragement to prepare this manuscript. We would like to support ASRAM authorities for their constant support.

REFERENCES

1. World Health Organization. Global tuberculosis control. Geneva, Switzerland: WHO Report 2010. WHO/CDS/TB/2010.275. [Google Scholar]
2. Golden MP, Vikram HR. Extrapulmonary tuberculosis: an overview. *American Family Physician*. 2005;72(9):1761–1768. [PubMed] [Google Scholar]
3. Kulkarni NS, Gopal GS, Ghaisas SG, Gupte NA. Epidemiological considerations and clinical features of ENT tuberculosis. *Journal of Laryngology and Otology*. 2001;115(7):555–558. [PubMed] [Google Scholar]
4. Harney M, Hone S, Timon C, Donnelly M. Laryngeal tuberculosis: an important diagnosis. *Journal of Laryngology and Otology*. 2000;114(11):878–880. [PubMed] [Google Scholar]
5. Shukla G K Dayal D Chabra D B Tuberculosis of maxillary sinus J Laryngol Otol 1972 86 88
6. Jain MR, Chundawat HS, Batra V. Tuberculosis of the maxillary antrum and of the orbit. *Indian J Ophthalmol*. 1979;27:18–20. [PubMed] [Google Scholar]
7. Kakeri AR, Patel AF, Walikar BN, Watwe MV, Rashinkar SM. A case of Tuberculosis of maxillary sinus. *Al Ameen J Med Sci*. 2008;1:139–41. [Google Scholar]
8. Butt AA. Nasal tuberculosis in the 20th century. *Am J Med Sci*. 1997;313:332–335. [PubMed]
9. Michael RC, Michael JS. Tuberculosis in otorhinolaryngology: clinical presentation and diagnostic challenges. *Int J Otolaryngol*. 2011;2011:686894. [PMC free article] [PubMed]
10. Vrat V Saharia P S Nayyar M (1985) Coexistence of tuberculosis and pregnancy in the maxillary sinus J Laryngol Otol 99 397 8
11. Grijalba-Uche M, Echeverria-Zabalza ME, Medina-Sola JJ. Primary nasal tuberculosis. *An Otorrinolaringol Ibero Am*. 1996;23:261–6. [PubMed]
12. Blumberg HM, Burman WJ, Chaisson RE, Daley CL, Etkind SC, Friedman LN, Fujiwara P, Grzemska M, Hopewell PC, Iseman MD, Jasmer RM, Koppaka V, Menzies RI, O'Brien RJ, Reves RR, Reichman LB, Simone PM, Starke JR, Vernon AA. American Thoracic Society, Centers for Disease Control and Prevention and the Infectious Diseases Society of America. American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America: treatment of tuberculosis. *Am J Respir Crit Care Med*. 2003;167:603–662. [PubMed]
13. Johnson IJ, Soames JV, Marshall HF. Nasal tuberculosis: an increasing problem? *J Laryngol*. 1995;109:326–7. [PubMed]