



## A case of Primary Tuberculosis

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**Abstract :** Primary Tuberculosis of nose is extremely rare. A case is presented because of its rare presentation involving the bony septum instead of cartilaginous septum. A 22 year old lady presented with bilateral nasal obstruction and pain over the dorsum of the nose. On nasal examination, irregular bulge arising from the posterior aspect of septum was found which was further confirmed with CT scan. Endoscopic transnasal excision of mass was done and histopathological examination was suggestive of chronic granulomatous inflammation probably of tuberculous aetiology. There was no systemic involvement. Post operative follow and response to ATT was good.

**Key-**

**word :** Primary, Tuberculosis, Nasal, Septum, Endoscopy, Excision, Biopsy

**Introduction**

Primary tuberculosis of nose is rare. Extra pulmonary tuberculosis is on the rise in many regions of the world but is still an under diagnosed entity. Nasal involvement of tuberculosis was first described in Venice by Giovanni Morgagni in 1761. We present here a case of primary tuberculosis of nasal septum.

**Case Report**

A 22 year old female presented with history of nasal obstruction on both sides (R > L) of 6 months duration and history of nasal discharge - mucoid in nature, sometimes blood stained. She also presented with pain over the dorsum of nose. She had no history of headache, dyspnoea, haemoptysis, ear discharge or throat complaints, loss of appetite or loss of weight. She had received several course of antibiotics with no response. Patient had received BCG vaccination in her child hood. On examination, her pulse rate was 80/min, respiratory rate was 20/min and blood pressure was 120/80mm of Hg. She was afebrile and her general condition was fair. Routine haematological and biochemical analysis were within normal limits except ESR was 50mm/hr. Serology for IGA, IGM, IGG for TB was negative. Mantoux test was negative. VDRL negative and HIV nonreactive. Sputum culture for Acid Fast Bacilli was negative. X-ray chest was normal.

CT Para nasal sinus (coronal view) revealed bulge in the posterior bony septum. Diagnostic nasal endoscopic examination revealed irregular bulge with granular surface in the posterior bony septum in both nasal cavity. Transnasal endoscopic excision of septal mass was done under GA. Biopsy revealed fragmented bony tissue and granuloma composed of epithelioid cells, langhan type of giant cells - suggestive of Tuberculous Granuloma of bony septum. Patient was started on CAT 1 ATT with Isoniazid 300 mgs, Rifampicin 450 mg, Pyrizinamide 1500 mg and Ethambutol 1000 mg for first 2 months and Isoniazid & Rifampicin for next 4 months. Patient is doing well after 3 months follow up and has no episodes of nasal blockage. Diagnostic Nasal Endoscopic examination revealed no evidence of growth.

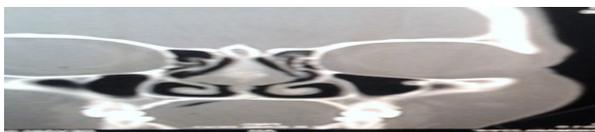
**Discussion**

Primary Nasal Tuberculosis is an extrapulmonary tuberculosis and is a rare entity. Rare presentation of the disease is due to the protective function provided by the ciliary action of the nasal mucosa, bacteriocidal properties of the nasal secretions and protective mechanism of nasal vibrissae.<sup>1</sup> Primary tuberculosis of nose occurs when there is no associated pulmonary disease and the causative organism directly infects the mucosa leading to granuloma formation.<sup>2</sup> Nose can become infected either directly (primary) through air current by people sneezing or coughing or by inoculation by finger born infections and by instrumentation. Most commonly involved site is nasal septum. It is mostly seen in females. When nasal tuberculosis presents as secondary tuberculosis, it commonly affects lateral nasal wall and septal involvement is rare. Nasal tuberculosis secondary to pulmonary tuberculosis occurs via lymph and blood vessels.<sup>3</sup> Tuberculous involvement of nasal cavity usually appears as a rapidly growing ulcer or tumour in the quadrangular cartilage of nasal septum. Involvement of posterior nares is rare.<sup>4</sup> In our case, posterior (bony) part of septum is involved. Infection from nose can extend into paranasal sinuses, orbit and also intracranially.<sup>5</sup> In our case patient presented in early stage when swelling was localised to septum. Usually Nasal Tuberculosis will present clinically as bloody nasal discharge which may be the earliest and the only presenting symptom. Diagnostic Nasal Endoscopy allows thorough examination of nasal cavity and nasopharynx and facilitates biopsy of granulomatous mass or nasal mucosa

. Diagnosis in our patient was arrived at by the presence of typical caseating granuloma in the endoscopically excised mass from septum. Workup done for tuberculosis elsewhere in the body was negative. Management consists of adequate anti tuberculosis therapy with excision surgery. In our case endoscopic excision of granulomatous mass was done.

**References**

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**Photos**

**Pre-op CT PNS (coronal view) showing septal mass Pre-op DNE showing septal mass along right posterior bony septum**



**Pre-op DNE showing septal mass along left posterior bony septum**



**Pre-op CT PNS showing septal mass HPE picture showing Tuberculous Granuloma of bony septum**



**Biopsy report Post op CT PNS (coronal view) showing septal defect**



**Post-op CT PNS (axial view) showing septal defect Post-op DNE showing posterior septal defect after septal mass excision**



**Patient profile**