

**Sinonasal polyp with osseous metaplasia – A rare case with review of literature**

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**Abstract**

Inflammatory nasal polyps are quite rare arising from the nasal septum especially with osseous metaplasia. They can extend to the oropharynx, when they are larger in size. We report a case of inflammatory nasal polyp arising from the nasal septum showing osseous metaplasia in a 65-year-old male patient. The polyp was larger in size extending into the oropharynx, which resulted in difficulty in swallowing along with nasal obstruction. Surgical excision was done and histopathological examination proved it to be inflammatory nasal polyp with osseous metaplasia.

**Keyword:** Inflammatory Nasal Polyp, Nasal Septum, Osseous Metaplasia.

**Introduction**

Inflammatory nasal polyps mostly arise from the lateral wall of the nasal cavity as well as sphenoid sinus, ethmoid sinus, middle and inferior turbinates as well as nasal septum. Nasal septum is the uncommon site for these polyps. Osseous metaplasia in inflammatory nasal polyp is even a rare occurrence (1).

**Case report**

A 65-year-old male patient presented with a history of nasal blockage and breathing difficulty since three years. There was a history of change in voice and difficulty in swallowing since two years. CT of the paranasal sinuses revealed a large, lobulated, expansile soft tissue mass measuring 7.8 x 5.8 x 4.9 cm arising from the left nasal cavity septum with heterogeneous patchy enhancement and opacification (osseous matrix) extending from the nasal cavity till the oropharynx. The patient gave a history of surgical excision for the same one month back, but symptoms were persisting; hence surgical excision was done again and the specimen was sent for histopathological examination. Gross examination revealed a polypoid mass measuring 6 x 3 x 2.4 cm, bony hard in consistency. A cut section of which showed bony tissue (Fig.1). Microscopic examination revealed a polypoid tissue covered with pseudostratified ciliated columnar epithelium. The core of the polyp showed inflammatory cells and osseous tissue (Fig.2). Considering these features, the case was diagnosed as inflammatory nasal polyp with osseous metaplasia.

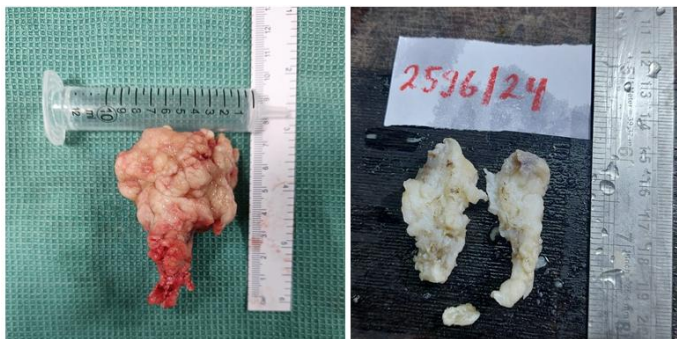


Fig. 1: Gross Large nasal polyp, cut section of which reveals bony tissue.



Fig 2- Microscopy- Polypoidal tissue lined by pseudostratified ciliated columnar epithelium with osseous metaplasia (100x H&E)

### Discussion

Nasal polyps have different features, among these osseous metaplasia is very rare (2). The pathogenesis of this entity is still not clear. Few studies have reported that it is closely related to inflammatory process (3,4). Bone morphogenetic protein (BMPs) play an important role in ossification of polyp. The second theory suggests that ossification in the polyp originates from bony tissue left behind during previous surgery or trauma (5). In our case there was history of previous resection one month back. Nasal septum is the rare site for inflammatory polyp which was seen in our case.

Clinical presentation of these cases is nasal obstruction, snoring, running nose and anosmia. Larger polyps can

extend upto the oropharynx and cause dysphagia as seen in our case.

CT scan of paranasal sinus in such cases reveal a lobulated mass with multiple clusters density with bony tissue in the center (6). Similar observation was noted in our case.

Bony tissue within a mass of nasal polyp needs careful clinical diagnosis because it can be associated with different pathologies like rhinoliths, inverted papilloma with calcification, chondrosarcoma and mycetoma (7,8). Surgical excision is the treatment of choice in these cases. Histopathological examination helps to arrive at a definitive diagnosis.

### Conclusion

Osseous metaplasia in inflammatory nasal polyp is quite uncommon. The surgeon needs to be aware of this entity and should be able to differentiate with other diseases. Histopathological examination helps in giving correct diagnosis.

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