
CASE REPORT

Fronto Ethmoid Osteoma- Case Report

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SUMMARY

Osteoma is new piece of bone usually grown on another piece of bone, typically the skull bone. It is a benign tumor. It represents the most common benign neoplasm of the nose and paranasal sinuses. The cause is uncertain, but commonly accepted theories propose embryologic, traumatic and infective. X rays and CT scans are the best ways of diagnosing. Surgery remains the mainstay of the treatment be it the old traditional method or FESS.

Keywords: Osteoma, paranasal sinus, FESS

INTRODUCTION

Osteoma is common benign lesions encountered by and ENT surgeon. It is the most common benign lesion of the nose and paranasal sinuses. Commonly it is asymptomatic. The most frequent site for origin is frontal, maxillary and sphenoid sinus. The symptoms include headache, nasal obstruction, facial pain, rhinorrhea, anosmia sinusitis and orbital/ocular symptoms. Viega was the first to report sinus osteoma in 1506. In 1733, Vallisnieri described the frontal sinus osteoma that protruded into the brain.

Pathology: It is more common in males and usually occurs between the second and third decade of life. The accepted theory of etiology is embryologic, traumatic and infective.

Embryologic: this theory states that adult tissues contain embryonic cells which remain dormant. They activate to become neoplasm. **Traumatic:** this states that inflammatory process initiates for tumor formation. This means trauma of bone will be the root of osteoma formation. **Infective:** osteitis resulting due to infection could lead to osteoma formation.

There are three types of osteomas. They are usually benign and grow slow and remain asymptomatic. Mostly occur at fronto-ethmoid region. They usually don't recur after excision. When dealing with osteoma it is useful to determine the site of origin for surgical purposes whether it lies medially or laterally to lamina papyracea.

CASE

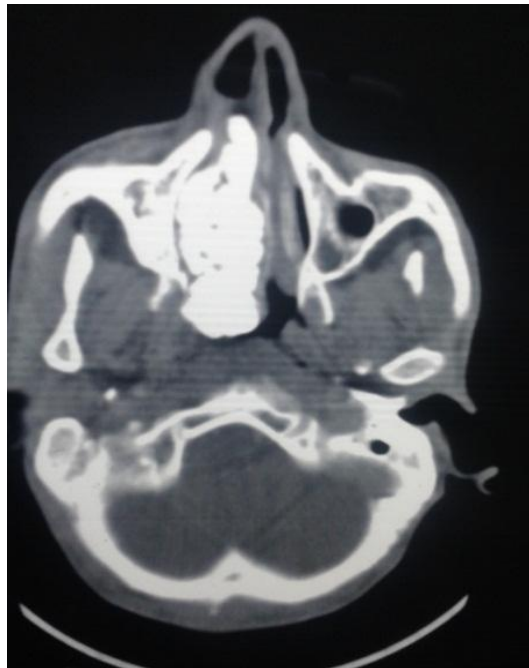
Twenty nine years old presented to the out-patients department with anorexia and weight loss for one month, bloody nasal discharge for two months, and post nasal drip for four months and difficulty in breathing for last six years. Patient was operated for nasal polyps two years back. Patient was diagnosed

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as Rhinolith in a secondary hospital and referred to Mayo Hospital for opinion and removal. CT scan was done which showed radio dense and radiopaque shadow in the right side of the nose filling the whole of nasal cavity, lamina papyracea, and maxillary sinus with osteoma as question mark by the radiologist. All baseline investigations were done which came out normal and so was the eye examination. Patient underwent general anesthesia and the nasal cavity examined, probing was done and attachment of the bony mass found. The bony mass was detached from all sides of the nasal cavity, soft palate, maxillary, ethmoid, lamina papyracea and maxillary sinuses with gauge and mallet and delivered in full through the posterior part of the nose and out via trans-oral route. Small rent at the soft palate on the right side was repaired with vicryl 2/0. Anterior nasal packing was done which was removed after 48 hours as per ward SOP. Patient was discharged the following day.





DISCUSSION

The most common site of osteomas is the mandible followed by the sinuses¹. The pathogenesis of osteomas remains controversial. There are three accepted theories but no single theory explains all osteomas adequately². They can occur at any age and are more common in males³. Continued growth may completely obstruct sinus Ostia or nasal cavity

and lead to development of mucocoeles⁴. Rarely, they may expand into the orbit⁵. Osteomas may be solitary or multiple. Multiple osteomas of the facial skeleton may occur in cases of Gardner syndrome⁶. No such lesion was found in our patient. Since most osteomas are asymptomatic, many ENT surgeons advocate periodic imaging to follow their growth and intervene before the development of the complications⁷. Indications for surgical treatment include serious cosmetic disfigurement, limitation or loss of function, significant growth rate or need for definitive histopathological diagnosis⁸. Treatment of osteomas consists of complete surgical removal at the base where it unites with the cortical bone⁹. The surgical procedure depends on the location, extent and existing complications¹⁰. There are no reports of osteomas undergoing malignant transformation⁹. In asymptomatic patients excision is not necessarily indicated and management varies from surgeon to surgeon. If Sino nasal symptoms are present, then they can be managed medically. In cases where the osteoma is thought to be responsible for symptoms then resection is required¹¹. Small osteomas need not to be treated. Larger ones must be surgically removed¹². Normal Sino nasal functioning can be expected after the initial period of healing¹³. In our case the cosmetic result was also more appealing, with no external excision present. The hospital stay was short and post-operative care was similar to any other nasal surgery patient.

CONCLUSION

Although it is a safe technique, meticulous care and patience is necessary to prevent potential complications such as cerebrospinal fluid leak¹³. Removal can be incomplete, with possible recurrence of the tumor and osteomas of the craniofacial region area are, in most cases, not recognized and are often mistaken for pathological processes of different nature¹⁴.

REFERENCES

1. Viswanatha B. Maxillary sinus osteoma: two cases and review of literature. *ACTA Otorhinolaryngol Ital.* June 2012; 32(3): 202-205.
2. Eller R, Sillers M. Common fibro-osseous lesions of the paranasal sinuses. *Otolaryngol Clin North Am.* 2006;39:585-600.
3. Kaplan I, Calderon S, Buchner A. Peripheral osteoma of the mandible: a study of 10 new cases and analysis of literature. *J Oral Maxillo Fac Surg.* 1994;52:467-470.
4. Mesolella M, Galli V, Testa D. Inferior turbinate osteoma: A rare cause of nasal obstruction. *Otolaryngol Head Neck Surg.* 2005;133:989-991.

5. Park W, Kim HS. Osteoma of the maxillary sinus: case report. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.*2006;102:e26-27.
6. Payne M, Anderson JA, Cook J. Gardener's syndrome- a case report. *Br Dent J.* 2002;193:383-384.
7. Johnson D, Tan L. Intraparenchymal Tension pneumatocele complicating frontal sinus osteoma: case report. *Neurosurgery.*2002; 50:878-879.
8. Stelios D, Christos B, Ioannis T. Peripheral osteoma of the maxilla: Report of an unusual case. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2005; 100:E19-24.
9. Nejat BS, Cahit U, Hakan AK, et al. Peripheral osteoma of the oral and maxillofacial region: a case study of 35 new cases. *J Oral maxillofac Surg.*2002; 60:1299-1301.
10. Lin C, Lin Y, Kang B. Middle turbinate osteoma presenting with ipsilateral facial pain, epiphora and nasal obstruction. *Otolaryngol Head Neck Surg.*2003;128:282-283.
11. Nikenejad MT, Gaillard F. Paranasal sinus osteoma. (<http://radiopaedia.org/articles/paranasal-sinus-osteoma>)
12. Schwartz MS, Crockett DM. Management of a large frontoethmoid osteoma with sinus cranialisation and cranial bone graft reconstruction. *Int Journ Paed Otorhinolaryngol Sept* 1990; 20:1.
13. Sari M, Baglam T, Yazici ZM et al. Endoscopic removal of the frontoethmoid osteoma: A case report. *Marmara med Journ;*2013:356 (www.marmaramedicaljournal.org/text.php3?id=356)
14. Moretti A, Croce A, Leone O et al. Osteoma maxillary sinus: case report. *ACTA otorhinolaryngol Ital.*2004; 24:219-222.