Inferior Turbinate Osteoma as a Cause of Unilateral Nose Obstruction

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ABSTRACT
Osteomas are benign, slow growing bone tumors often seen in paranasal sinuses, mostly in the frontal sinus, whereas they are rare in the nasal cavity. Inferior turbinate osteoma is extremely rare and our case is the third reported in the literature to date. Symptoms vary depending on the location, size and spreading and nasal obstruction is the most common symptom. Treatment of osteomas is surgical and is reserved only for rapidly growing osteomas with symptoms of infection or compression. Although endoscopic surgery is preferred modality, external approach with lateral rhinotomy should be considered with larger osteomas especially those that involve the ethmoid labyrinth. In cases like ours, when large osteoma is localized on the inferior nasal turbinate, sublabial incision through the vestibulum is very suitable approach because it provides wide access and good visibility and leaves no visible scar.

Key words: osteoma, inferior turbinate, nasal obstruction

Introduction
Osteomas are benign, slow growing bone tumors, usually made of compact bone surrounding spongy bone. They can occur in all bones as single or as multiple lesions, and some reported cases of osteomas in soft tissues1–4. Usually it is a solid node, 10–20 mm in diameter, with wide or narrow stem5,6. They occur at any age with the highest incidence between the second and the fourth decade, and slight male predominance. Most of them are asymptomatic and are usually discovered incidentally during radiological examinations. Osteomas are often seen in paranasal sinuses, mostly in the frontal sinus whereas they are rare in the nasal cavity, only 0.6%1–7. Their occurrence is linked to the development of paranasal cavities. They are extremely rare on turbinates and there were only two cases of inferior turbinate osteoma reported in the literature to date8–25.

Symptoms of osteomas located in the ethmoid sinus appear earlier due to its small size and quicker spread into the surrounding structures.

The absences of symptoms or nonspecific symptoms are cause of a late diagnosis. Symptoms vary depending on the location, size and spreading. Nasal obstruction is the most common symptom. Headache appears due to pressure and spreading or inflammation of the paranasal sinus caused by the orifice obstruction and disruption of mucociliary transport. Symptoms of osteomas located in the ethmoid sinus appear earlier due to its constricted size and quicker spread into the surrounding structures8–12.

Treatment of osteomas is surgical and is reserved only for rapidly growing osteomas with symptoms of infection or compression1–6.

Case Report
A 50-year-old man was referred to the ENT specialist with 3-month history of progressive left side nasal obstruction resistant to therapy with nasal decongestant and intranasal corticosteroid spray. He had no history of head trauma, facial surgery or allergy and his past medical history was unremarkable. Clinical examination revealed solid and painless circular-shaped tumor of the inferior turbinate, covered with normal mucosa, almost completely obstructing the nasal cavity behind the nasal
valve. The tumor reclined on the septum and bottom of
the nasal cavity, leaving free only a narrow space to the
upper portion of the nasal cavity. Examination with a
flexible endoscope showed that the tumor was limited
only to the inferior turbinate, leaving the rest of the na-
sal cavity intact. Computed tomography (CT) scan of
paranasal sinuses showed a well defined expansive tu-
mor, 19 x 17 mm, in the left inferior turbinate alongside
the ventromedial edge of the left maxillary sinus, which
had decreased aeration and luminal opacification. De-
scribed tumor had the absorption coefficient of bone tis-
ssue, and differential diagnosis corresponded to osteoma
(Figure 1). Due to the size and hardness of the tumor en-
doscopic procedure was not feasible therefore we used
sublabial approach through the upper mouth vestibule to
access to the bottom of the nose and extirpated the tu-
mor which was well separated from the piriformed aper-
ture (Figure 2). Pathohistological findings revealed a tu-
mor made of dense mature bone surrounding spongious
bone and confirmed the diagnosis of osteoma (Figure 3).
Postoperative course was uneventful and the patient was
symptom-free.

Discussion

Osteomas are relatively common in the paranasal si-

nuses. They occur most frequently in the frontal sinus
(71.8%), then in the ethmoid (18.9%), the maxillary sinus
(6.3%), and the sphenoid 4.9%. They can grow without
symptoms for a long time and very often are discovered
incidentally during radiological examination for some
other condition1–6. Incidental detection in normal radi-
ological tests was about 1%, and in CT scans about 3%5–7.
Although their etiology is unknown, there are three the-
ories: embryological, posttraumatic and infectious. Con-
sidering their place of origin osteomas are classified into
central, peripheral and extraskeletal, depending if they
grow from endosteum, periosteum or from soft tissue,
usually muscle1,5. In the craniofacial region, rarities such
as osteomas situated in the throat and tongue, have been
described14–18.
Nasal turbinates osteomas are extremely rare and
only two cases of osteomas localized in the lower, three
on the middle, and one on the upper nasal turbinate have
been reported in the literature to date19–21.
In symptomatic osteoma CT scan of paranasal sinuses is necessary in order to determine the extent and size of the tumor, whereas magnetic resonance imaging may be useful in distinguishing inflammatory lesions from a neoplasm lav5–6.

Treatment of choice is surgical excision, which is indicated only in symptomatic osteoma. Although endoscopic surgery is preferred modality, external approach with lateral rhinotomy should be considered with larger osteomas especially those that involve the ethmoid labyrinth lav8–13.

In cases like ours, when large osteoma is localized on the inferior nasal turbinate, there is not enough room for endoscopic removal, therefore sublabial incision through the vestibulum is very suitable approach because it provides wide access and good visibility and leaves no visible scar.

Conclusion

Inferior turbinate osteoma is extremely rare and our case is the third reported in the literature to date. Endoscopic surgery is the golden standard in treatment. However, if tumor size prevents endoscopic removal sublabial approach is the choice of treatment because it provides wide access and good visibility and leaves no visible scar.

REFERENCES