FRONTAL SINUS OSTEOMAS MANAGEMENT
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Introduction:
Craniofacial osteomas are benign tumors of the skull-base, often involving the paranasal sinuses. There are slow-growing tumors that can present in any one of the sinuses, though more common in the frontal and ethmoids; can present incidental to other evaluation, or due to postobstructive sinusitis caused by the enlarging bony mass; association with Gardner syndrome. The frontal sinus is the most common site of involvement. The growth rate is very slow, and it may take many years for osteomas to become clinically apparent.

In differential diagnosis may be included:
- Osseous / fibro-osseous
  - Osteoma
  - Ossifying fibroma
- Odontogenic (Ameloblastoma, Odontogenic cyst)
- Inverted papilloma
- Minor salivary gland neoplasm (pleomorphic adenoma, monomorphic adenoma, and oncocytoma)
- Neuromas

Methods:
Between the years 2003-2015, in the ENT Department Timisoara, 11 patients were treated for frontal sinus osteoma, 4 females and 7 males.

Management of uncomplicated sinus osteomas is controversial, since surgery involves serious potential risks.

In ENT Department Timisoara we used external approach in each case.

Results:
All 11 patients underwent surgery, the postoperative results were very good External frontoetmoidectomy (Lynch-Howarth approach.
A curved incision was made, beginning level with the medial canthus, mid-way between the medial canthus and the nasal bridge, and cutting down to bone.
The incision was extended superiorly under the eyebrow for a variabled distance but care was taken to avoid division of the supratrochlear vessels and nerve.
The periosteum was incised and elevated with a Freer’s elevator to expose the nasal process of the maxilla, frontal bone and medial wall of the orbit. The periosteum was quite firmly attached to the anterior lacrimal crest and at the frontonasal and frontoethmoidal sutures.

Care was taken not to penetrate it or orbital fat will prolapse into the surgical field.
The frontal sinus ostium was cleared, being obstructed by disease. However, if any mucosa was salvaged, it enhanced future patency of this region.
The frontal sinus osteomas were completely removed in all cases.

Maintenance of long-term patency of the frontal recess is one of the major problems in sinus surgery.

Despite the creation of a large channel, closure frequently occurs, due to circumferential fibrosis and new bone formation.

A considerable variety of strategies have been employed during time to stent the area, although none have proved infallible. We used a silastic tube from the sinus into the middle meatus and opens into the nasal cavity. The tube was fashioned to sit just within the middle meatus. The size of the tube ensures that it will stay in place but it can be held in position by a suture on a small straight needle through the middle turbinate and septum, placed under endoscopic visualisation.

The periosteal layer was closed with catgut, paying special attention to the trochlear region, which should be formally reattached to the periosteum of the frontal region with a non-resorbable suture. The skin was sutured with fine silk or nylon.

Conclusions:
Frontal sinus osteomas, skull base benign tumors, are very rare and the treatment is surgical by an external approach.

References:
Lynch RC (1921) The technique of a radical frontal sinus operation which has given me the best results. Laryngoscope 31, 1-5.