An interesting Case of Sinonasal Ossifying Fibroma.

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Abstract:
Ossifying fibroma was first described by Menzel in 1872. It is a destructive, deforming, slow growing benign fibro-osseous tumour that can occur anywhere in the facial skeleton. This uncommon tumour can present a diagnostic dilemma for the clinician and pathologist, owing to overlapping clinical and histomorphologic features. We report a case of sinonasal ossifying fibroma involving both the nasal cavities, the ethmoids and the right maxillary sinus in a 71 year old male patient. We did a Lateral Rhinotomy and excision of the mass and histopathological examination confirmed the diagnosis of ossifying fibroma. Involvement of ethmoid sinus is rare in this condition with only 48 cases reported in literature till June 2011.

Keyword: ossifying fibroma, paranasal sinus, ethmoid, maxillary sinus

INTRODUCTION
Ossifying fibromas manifest typically as painless slow growing tumours. It is common in the tibia and fibula of children 10 years or younger. Ossifying fibroma of the sinonasal tract occurs at a slightly older age (3rd to 4th decade of life) and women are affected more often than men with a female to male ratio of 2:1. There is no evidence of hereditary predominance. Extramandibular lesions such as those occur in the midface and paranasal sinuses tend to display more rapid behavior and aggressive behavior and rapid growth. We report a case of sinonasal ossifying fibroma involving both the nasal cavities, the ethmoids and the right maxillary sinus in a 71 year old male patient.

CASE REPORT
A 71 year old male patient presented to our hospital with complaints of nasal obstruction for the past 14 years. He also gives history of nasal discharge, diplopia, proptosis and mouth breathing since the past 2 years. There is no significant past medical or surgical history. On examination patient was conscious and oriented. Vitals were stable. General systemic examination was normal.

E.N.T examination:

Nose: broad root of nose with increased intercanthal distance. Vestibule and columella were normal. There was deviation of nasal septum to the left with narrow left nasal cavity. A greyish white irregular surfaced mass was seen in the right nasal. On probing, it was firm to hard in consistency and not bleeding on touch. The probe could not be passed all around the mass. Post nasal examination was normal. Oral cavity and oropharynx were normal. Clinical examination of the ear was found to be normal. Examination of the eye showed bilateral eccentric proptosis. Diplopia was present with vision 6/9 in both eyes. There was no restriction of ocular movements. Direct and
consensual light reflex were present in both the eyes. Examination of neck was normal with no palpable nodes. A Diagnostic nasal endoscopy was performed which showed a polypoidal mass filling the right nasal cavity beyond which the scope could not be passed further.

Endoscopic appearance
Biopsy was taken and was sent for histopathological examination. HPE showed a polyposoid lined by stratified squamous epithelium. The underlying edematous stroma showed inflammatory cell infiltrate, suggestive of inflammatory polyp. A Computed tomography of the paranasal sinuses (plain and contrast) was done which showed a large expansile mixed density lesion with area of calcification in the periphery which deviates the lamina papyracea and expands into the orbit. The mass obstructed the osteomeatal complex on both sides with mucosal thickening in both maxillary sinuses. Mass projected into the right maxillary sinus with erosion of the medial wall of the right maxillary sinus. Middle turbinate was not visualized in both sides.

Differential diagnosis included Ossifying fibroma, fibrous dysplasia, sinonasal psammomatous meningioma and well differentiated osteosarcoma.

We proceeded with surgical exploration under general anaesthesia. A Lateral rhinotomy and excision of mass the was performed. By using Moure’s extended lateral rhinotomy incision on the right side, the right nasal cavity was opened. A hard ivory coloured mass was visualized. Mass was drilled out and chiseled out. Mass was removed into the nasal cavity. Haemostasis was achieved. A medicated nasal pack was kept and wound was closed in two layers. Patient recovered from general anaesthesia well.

OPERATIVE PICTURES HISTOPATHOLOGICAL PICTURE
The excised mass was sent for histopathological examination. It was a bony mass (5x4 cms) with nodular surface which on cross section showed bony areas and local friable area. Microscopically there was superficial nasal mucosa with ulceration and chronic inflammatory cell infiltration. There was underlying nodular proliferation of bony trabeculae and intervening fibrous tissue proliferation. there was no malignant change. The picture was suggestive of ossifying fibroma. Patient was put on broad spectrum IV antibiotics and analgesics. The next day nasal packing was removed and there was no anterior or post nasal bleeding. crusts were removed and nasal cavity was clear.suture removal was done on the 7th post-operative day. A diagnostic nasal endoscopy and cleaning was performed at the 10th post-operative day and nasal cavity was found to be normal.

DISCUSSION

Ossifying fibroma (OF) is a rare benign fibro-osseous lesion which was first described by Menzel in 1872. He considered it as a form of Osteoma but the term of "Ossifying Fibroma" was subsequently coined by Montgomery in 1927.

In the head and neck region, lesions arise in the mandible in 62% to 89% of patients followed by the maxilla and rarely the orbit, skull base and calvarium. Women are affected more than men with female to male ratio of 2:1. Ossifying fibroma of the sinonasal tract occurs during the 3rd to 4th decade of life.

Etiology of Ossifying fibroma is unknown, but these lesions are presumed to originate from periodontal ligaments of the teeth because of their capacity to produce cementum and osteoid material. Other theories include traumatic and developmental causes.

Clinical presentation of these tumours is variable, depending on the site and rate of growth. Can remain asymptomatic or may lead to symptoms due to mass effect such as nasal obstruction, anosmia, hyposmia, head ache or epistaxis. Ocular symptoms include visual loss, diplopia, proptosis and epiphora. Larger tumours may also lead to a painless swelling of the involved bone.

Computed tomography of the paranasal sinuses show a well circumscribed lesion with a nonhomogenous matrix with ground glass opacification representing diffuse calcifications and low attenuation areas containing fibrous tissue with possible contrast enhancement. The walls of the sinuses may undergo further remodeling and thickening, sometimes along with erosions. Radionuclide scintigraphy is another useful diagnostic modality. Magnetic resonance imaging is particularly useful for ruling out an intracranial or intraorbital extension.

Differential diagnosis includes fibrous dysplasia, sinonasal psammomatous meningioma and well differentiated osteosarcoma. The overall prognosis of ossifying fibroma appears to be good. Most lesions of ossifying fibroma are treated with excision or curettage with or without bone grafting. Endoscopic removal has also been tried successfully. But these conservative techniques and piecemeal approaches could make histological interpretation more difficult, especially in cases of hybrid lesions. Hence wherever possible, an open surgical technique is advised for adequate visualization and complete excision. The Lynch Howarth approach has been particularly useful to relieve proptosis when the tumor was confined only to the medial portion of the orbit and the ethmoid. The extended Caldwell Luc approach and sublabial approach are more suitable for lesions involving the maxilla and the premaxilla and had the advantage of having no external scar. Lateral rhinotomy approach gave the widest access and exposure to all the regions, but with an external scar. Surgical complications may include significant blood loss, requiring transfusion and loss of vision. Recurrences after surgery have been common and reported to be in the range of 30 to 56%. Our case presented with ossifying fibroma involving the nasal cavity, ethmoids and the right maxillary sinus. Only a few cases have been reported with such a presentation.

CONCLUSION

Ossifying fibroma is a benign fibro-osseous tumor of the craniofacial region that is diagnosed with a combination of clinical, radiological and pathological criteria. Due to the peculiarity and aggressive behavior of Ossifying Fibroma with special references to the existence of hybrid lesions in this variety of tumours it is a must to remove the tumour enmass and to go for multiple sections for histopathological examination for reporting. Complete excision of the tumour was possible in this case because of the perfect preoperative planning.

BIBLIOGRAPHY


