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Case Report *Volume 5 Issue 1*

Sinonasal Solitary Enchondroma - A Rare Case Report

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Abstract

Enchondroma is a benign tumour arising from cartilaginous tissue. Sinonasal tract Enchondroma is a relatively rare entity with a very few cases, reported in the literature. Most commonly seen in the small bones of hands and feet. It is seen in the elderly population with a male preponderance. Etiology is unknown till present date. In this case report we present a case of nasal septal enchondroma in a 75 year old male patient. Patient presented with right nasal obstruction and epistaxis from right nostril since 3 months. Preoperative evaluation included diagnostic nasal endoscopy (DNE) and Contrast enhanced computed tomography (CECT). Transnasal complete excision of the mass was planned using microdebrider. Post-surgery, patient was completely relieved from the symptoms. Patient was kept on a regular follow up of once every 6 months for 2 years to look for any signs of recurrence. Although a rare pathology, it should be kept as a differential diagnosis for unilateral (U/L) nasal mass presenting with epistaxis.

Keywords: Sinonasal Tract Enchondroma; Nasal Obstruction; Benign Cartilaginous Tumour; U/L Nasal Mass; U/L Epistaxis; U/L Nasal Mass

Abbreviations

DNE: Diagnostic Nasal Endoscopy; CECT: Contrast Enhanced Computed Tomography; FESS: Functional Endoscopic Sinus Surgery; HPE: Histopathological Examination; OPD: Out Patient Department.

Introduction

Enchondromas are benign intramedullary tumours most commonly seen in small bones of hand and feet [1]. Solitary sinonasal enchondroma is a rare entity with less than 10 cases reported in the literature. These tumours are differentiated from chondromas histologically. Chondromas are soft tissue tumours whereas enchondromas are composed of hyaline cartilage nodules arising from medullary canal of bone [2,3]. Complete surgical resection ensures less local recurrence rate [3,4]. Further research and more data is required to establish evidence for its malignant transformation as seen in Ollier's disease and Maffucci's syndrome [5]. We present a case report of solitary sinonasal enchondroma and discuss the symptomatology, diagnostic methods, management and histology.

Case Report

A 75 year old male patient presented to our Out-patient department (OPD) with chief complaints of headache, right sided nasal blockage and epistaxis since 3 months. On DNE, a reddish mass arising from the septum, abutting laterally over the Inferior turbinate and middle turbinate and completely obstructing the right nasal cavity and not extending beyond the choana was noted. Nasopharynx was normal and free of mass. Mass was soft, globular, smooth with superficial blood vessels on the surface, non-pulsatile and not bleeding on probing (Figure 1). There was no neck lymphadenopathy. CECT scan showed an expansile, well defined heterogenous, hyperdense lesion in the right nasal cavity between septum and the inferior turbinate with remodeling of nasal septum and lateral nasal wall (Figure 2). Surgical excision and histopathological examination (HPE) for confirmation of diagnosis was planned.

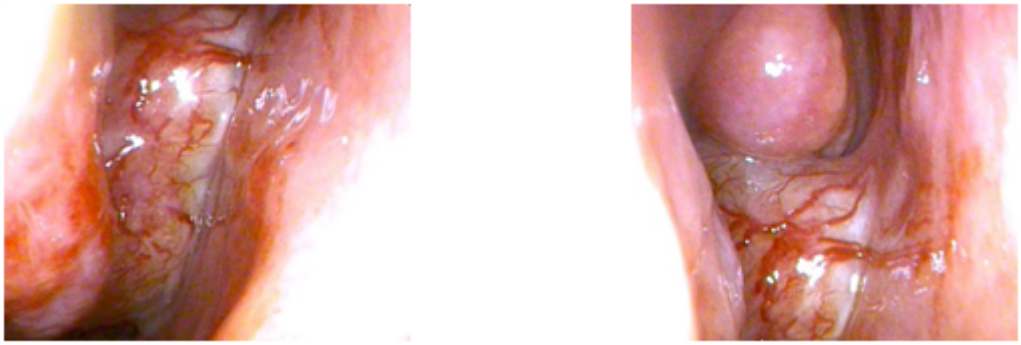

Figure 1: Preoperative DNE.

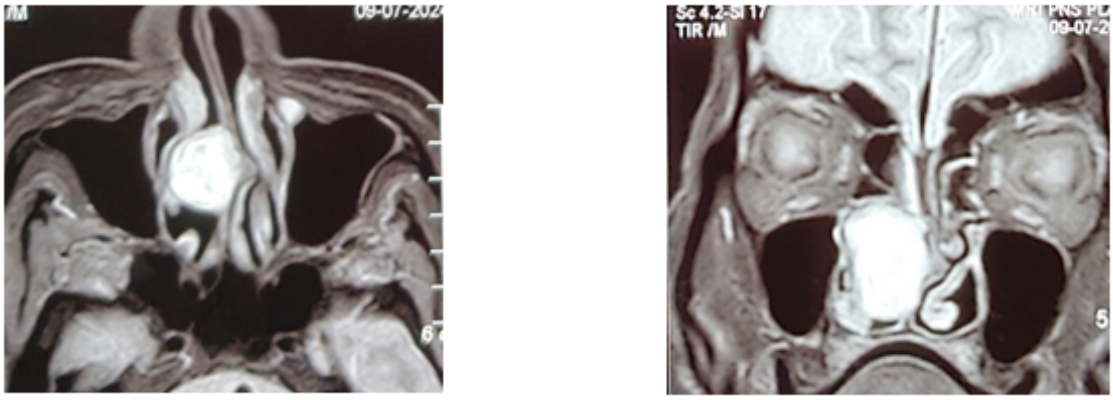

Figure 2: CECT- Scan Axial view & Coronal view.

Surgical Technique

Transnasal endoscopic excision was planned under general anaesthesia. Oral Endotracheal intubation was done. B/L nasal cavities were decongested using neuropatties soaked with lignocaine 4% and xylometazoline drops for 15 minutes. Using 0 degree 4 mm nasal endoscope, needle aspiration of the mass was done using 18 gauze needles under vision. Minimal amount of serous fluid was aspirated. Using a probe, extension the mass was noted. Mass had a small medial stalk arising from the bony septum and was completely free all around. It had pressure effect over the septum, inferior tubinate and middle turbinate. Using microdebrider blade of size 3.5 mm 0 RAD and 40 RAD, the mass was debrided from the stalk and removed in toto. Biopsy specimen was sent for HPE. Haemostasis was achieved using coblator. Right nasal cavity was packed using ivalon 10 cm nasal pack. Patient was started on oral antibiotics and pain management was done with Non-steroidal anti-inflammatory agents. Nasal packs were removed after 24 hours and postoperative medications were given for 7 days. After surgery patient improved in terms of headache, nasal bleeding and nasal blockage. Histopathology reports confirmed Sinonasal Enchondroma (Figure 3).

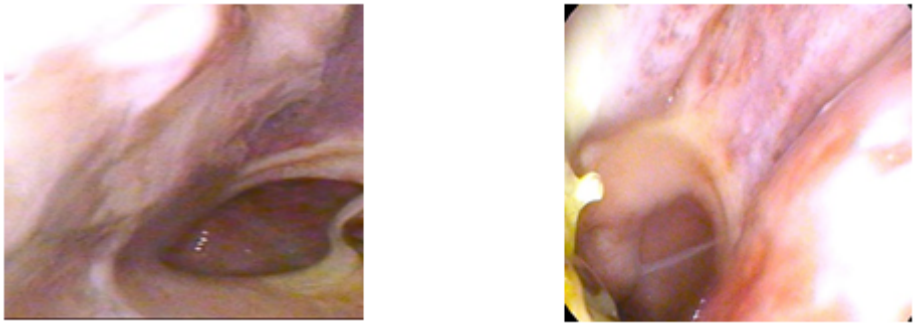

Figure 3: Postoperative DNE.

Follow up

Patient was kept on regular follow up and DNE was done at 2 weeks, 6 weeks and then every 6 months for 2 years. No recurrence was noted.

Figure 4: Histopathology slide image.

A nodular submucosal hypocellular tumour composed of hyaline cartilage. Tumour cells are embedded within lacunar spaces. Nuclei are small, round with condensed chromatin and eosinophilic cytoplasm. No evidence of significant mitosis or atypia seen.

Discussion

Solitary sinonasal Enchondroma is a rare benign tumour, arising from the medullary cavity of the bone. It represents 12-24% of all benign bone tumours [1]. Most commonly seen in elderly population without sex prediclition. Lichtenstein classified chondrogenic tumours histologically into four types: osteochondromas, enchondromas, chondroblastoma and chondromyxoid fibroma. Although these tumours have similar clinical presentations, they may vary in terms of imaging findings, HPE, and propensity to undergo malignant transformation [2,3].

HPE examination is of outmost important to differentiate between these tumours. Enchondroma, typically shows low cellularity with abundant hyaline cartilage matrix occasionally with calcifications and degenerations [4,5]. Chondrocytes have smaller nuclei, uniform in size without atypia. A rim of mature bone is always present at the periphery. In cases where there is breach in the cortex, or the tumour is grown through the cortex, it is highly suspicious of malignanacy [6]. In case of malignancy, HPE demonstrates poorly differentiated pleomorphic chondrocytes with hypercellularity and hyperchromatism with cell atypia and loss of cartilaginous architecture. Malignant lesions stain positively with immunohistochemical stains like vimetin and S100.

On radiological examination, Encondromas are lytic, expansile lesions with well-defined margins [5,6,7]. On Magnetic resonance imaging, T1 - weighted images show intermediate signal intensity and T2- weighted images show high signal intensity. Imaging findings indicating malignant changes are cortical erosions or destructions and irregular radiolucent areas. Imaging studies cannot distinguish between the subtypes of cartilaginous tumours, tissue biopsy is required for definitive diagnosis and further line of management [6-, von Hlippel- Lindau syndrome,

Klippel- Trenaunay syndrome and blue rubber bleb nevus syndrome. Malignant transformation of enchondromas in these head and neck conditions ranges from 23% - 37 %. Whereas Sinonasal Encondromas have less than 2% of risk of malignancy transformation [7,8].

Management of sinonasal solitary enchondromas is Functional endoscopic sinus surgery (FESS) WITH complete surgical resection and close follow up monitoring [4-8]. In case of other cartilaginous tumours and tumours with malignant transformations on HPE, gross total resection with postoperative chemotherapy and radiotherapy is the treatment of choice. In all sinonasal tract cartilaginous tumours, routine surveillance with endoscopic evaluation is strongly recommended. Nasal enchondromas generally have a good prognosis following complete surgical excision. However, regular follow-up is essential to monitor for any signs of recurrence [7,8].

Conclusion

Enchondromas are rare benign neoplasm originating from the medullary cavity of the bone. These tumours represent a distinct histological entity from the chondromas, which originate from soft tissues. Sinonasal tract solitary enchondromas have less than 2% chances of malignant transformation rate, as compared to multiple enchondromatosis seen in congenital diseases having malignant transformation rate of 23% - 37%. This case underscores the importance of considering benign tumors like enchondromas in the differential diagnosis of patients presenting with nasal obstruction and epistaxis. Endoscopic surgical techniques, such as FESS, provide a minimally invasive and effective approach for the management of such lesions, ensuring complete excision and symptomatic relief. More data is required to evaluate malignant transformation rate of the sinonasal tract enchondromas.

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