

then, isolated cases of this benign tumour have been reported. The size of the tumour may vary and in general they are smaller than 3 cm during the first examination. It has higher incidence in female patients, mostly in the second and third decades of life and it is rare in puberty.¹ Though it is normally asymptomatic, it may produce pain by invasion of neighbouring structures or widening of periosteum. The complications are recurrence, facial nerve affection, sigmoid sinus damage and sensorineural hearing loss by nervous compression of inner ear.²

The clinical and radiological findings along with histopathologic evidence demonstrate the diagnosis of mastoid osteoma. Following types of mastoid osteomas have been described -a) Compact: the most frequent one, comprising dense, compact and lamellar bone, with few vessels and Haversian canals; b) Cartilaginous: comprising bone and cartilaginous elements; c) Spongy: rare type, comprising spongy bone and fibrous tissue, with tendency to expand to the diploe and involving the internal and external lamina of the affected bone; d) Mixed: mixture of spongy and compact types.² Differential diagnosis is with other benign bone forming lesions like osteochondroma, chondroma, osteblastoma, exostosis, fibrous dysplasia etc. and with malignant lesions like osteosarcoma. The most widely accepted theories on the aetiopathogenesis of mastoid osteoma include embryogenesis, metaplasia, inflammation and trauma.³

Surgical removal is done for the cosmetic deformity. It is a simple procedure for the vast majority of small osteomas. Early surgical treatment is recommended to avoid the later development of giant osteoma with potential risks of surgical complications.⁴ Giant osteoma of the mastoid is a rare benign neoplasm that produces symptoms by encroachment on adjacent structures.⁵ Fenton JE et al (1996) suggests that routine histologic assessment cannot distinguish between osteomata and exostoses of the temporal bone. These lesions cannot be distinguished according to the presence or absence of fibrovascular channels, as has been suggested.⁶

REFERENCES

1. Denia A, Perez F, Canalis RR, Graham MD (1979) :*Extracanalicular osteomas of the temporal bone, Arch Otolaryngol, 105(12): 706-9.*

2. Burton DM, Gonzalez C (1991) : *Mastoid osteomas, Ear Nose Throat J, 70(3): 161-2.*

3. D' Ottavi LR, Picirillo E, De Sanctis S, Cerqua N (1997): *Mastoid osteomas: review of literature and presentation of 2 clinical cases, Acta Otorhinolaryngol Ital, 17(2): 136-9.*

4. Guerin N, Chauveau E, Julien M, Dumont JM, Meriguargues G (1996): *Osteoma of the mastoid: apropos of 2 cases, Rev Laryngol Otol Rhinol (Bord), 117(2):127,32*

5. Probst LE, Shankar L, Fox R : *Osteoma of the mastoid bone J Otolaryngol, 1991; 20 (3): 228-30.*

6. Fenton JE, Turner J, Fagan PA (1996): *A Histopathologic Review of Temporal bone Exostoses and Osteomata, Laryngoscope, 106: 624-28.*

Address for correspondence

Dr. Swapan Kr. Ghosh
Flat 101B,
Girikunj, 390,
S.N.Roy Road,
Kolkata - 700 038.



Fig. I : Mastoid osteoma as a postauricular swelling.

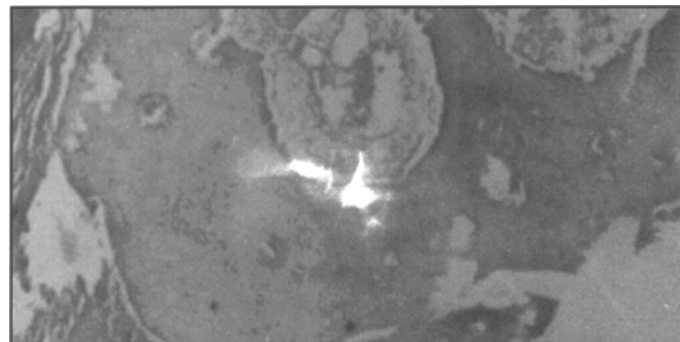


Fig. II : Microphotograph of osteoma of the mastoid showing mature bone tissue.

Short Communications

A CASE OF SOLITARY FIBROUS TUMOUR OF THE NOSE AND PARANASAL SINUSES.

K.V.Rajan*, T.Santhi**

Abstract: Solitary fibrous tumours (SFT), formerly known as benign fibrous mesothelioma, are rare mesenchymal spindle cell neoplasms, originally described in the pleura, but now found to arise in many other locations such as mediastinum, urogenital tract, face, nose, paranasal sinuses, orbit, meninges, ear, buccal mucosa, tongue, salivary gland etc. It was first described as a distinct neoplasm in 1931 by Klemperer and Rabin'. On reviewing the literature, so far, 21 cases have been reported involving the nose and paranasal sinuses.² A case of solitary fibrous tumour of the nose and paranasal sinuses is presented

Key words : Solitary fibrous tumour, paranasal sinuses,

CASE REPORT

A 42 year old hypertensive man presented with nasal block and recurrent blood stained nasal discharge of one year duration. On examination, he had a pinkish firm mass covered with purulent discharge filling the right nasal cavity. He had no diplopia, blurring of vision, trismus, paraesthesia of the face or loosening of teeth. Biopsy from the mass showed an inflammatory polyp with spindle cell component. CT scan revealed a slightly heterogenous soft tissue mass involving the right maxillary antrum, nasal cavity, ethmoid sinus without destroying the sinus septae, and to the nasopharynx through the choana. (Fig. 1.) There was no evidence of calcification.

Under GA, lateral rhinotomy with medial maxillectomy was performed. A nodular firm mass which was found filling the right nasal cavity, antrum and anterior ethmoids was removed. (Fig.2).

Polypoidal mucosal thickening was noted in the posterior ethmoids, sphenoid and frontal sinus. No bony erosion was seen. Histopathologically the tumour was unencapsulated and composed of variable cellular proliferation of bland spindle shaped cells lacking any pattern of growth. Immunohistochemical analysis showed MIC-2 (Fig. 3) and vimentin (Fig. 4) reactivity which supported the histological diagnosis. Post operative period was uneventful. 10 days later the patient left the hospital. There has been no recurrence of the tumour after 11 months of follow up.

DISCUSSION

The increased number of SFT probably indicates recognition of the tumour in extrapleural sites which is now supported by immunohistochemical analysis. The usual age of presentation ranges from 9 to 86 years¹. There is no sex predilection.

SFT arises from submesothelial mesenchymal fibroblast like cell. In the nose it presents as a benign, unilateral nasal mass. Nasal obstruction with discharge and epistaxis are the usual features. Clinically the tumour appears as whitish, multinodular,

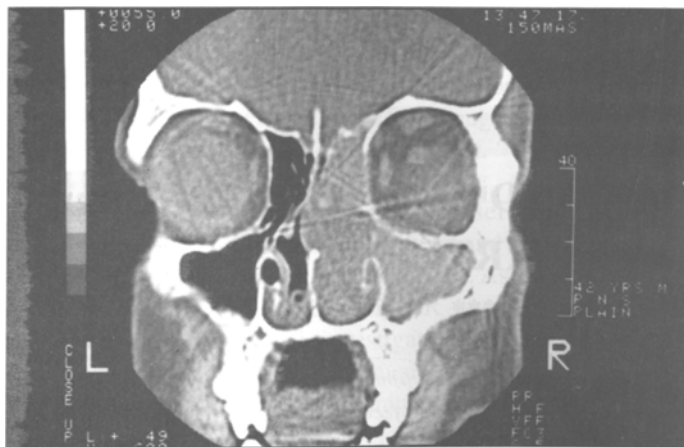


Figure 1—Coronal CT scan Head with contrast showing a slightly heterogenous mass filling the right maxillary antrum, nasal cavity and ethmoids without destroying the sinus septae.

firm, well circumscribed mass. Intracranial invasion and erosion of adjacent structures are common, but metastasis is rare.

CT scan shows a slightly heterogenous soft tissue mass. Calcification may be seen. There are few reports of MRI imaging features. Usually the tumour shows hypointensity on T2 weighted images. MRI is far more superior to CT to know the tumour extent. The cut surface of the tumour is firm with yellow tan and exhibits a whorled or nodular pattern. Areas of necrosis, haemorrhage or cystic degeneration is seen in larger or malignant lesions.

Histopathologically, SFT appears as low grade neoplasm of variable cellularity. The prominent features are intermingling of blunt spindle cells and collagen in a random fashion, the so called patternless pattern, keloid like hyalinization, hyper and hypocellular areas, and prominent blood vessels resembling hemangiopericytoma.

Immunohistochemically, these cells stain positive for vimentin, CD34, bcl-2, CD99 and SMA and negative for S-100, HBME-1, desmin, keratin and EMA¹. SFT can be diagnosed malignant on the basis of increased cellularity, mitotic activity (more than 4 mitotic figures per 10 high power fields), nuclear pleomorphism and areas of necrosis^{1,3}. The values of bFGF (basic fibroblastic growth factor) and ki-67 labeling index are significantly raised in malignant SFT³. These proteins are thought to be useful markers for prognosis of SFT.

Complete resection is the best prognostic indicator. Recurrent tumours may exhibit malignant histologic features. Close surveillance is warranted for tumours larger than 10 cm or with histologically malignant component⁴. 12-20 % of the cases show recurrence and metastasis¹.

SFT of the sinonasal tract are usually amenable to complete resection. While thoracic and extrathoracic SFT have similar clinical and pathological features, extrathoracic SFT have an increased rate of local recurrence and metastasis after surgical excision⁴. A widely invasive SFT involving the nose, paranasal sinuses and anterior cranial fossa has been reported¹. Another similar case invading the sinuses, nasopharynx, cavernous sinus, pituitary fossa and carotid artery has also been reported in the literature⁵. For tumours involving the sinuses, resection may be carried out by endoscopic sinus surgery^{2,6}.



Figure 2: The resected specimen shows a whitish, firm, multinodular mass.

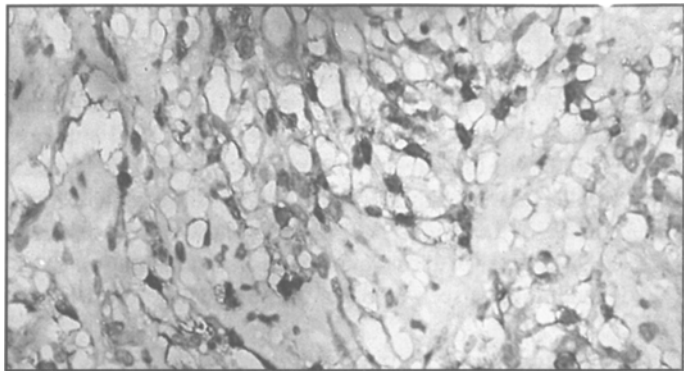


Fig. 3: Microphotograph of SFT (High power field) showing patternless arrangement of bland spindle cells and collagen fibres with MIC-2 reactivity.

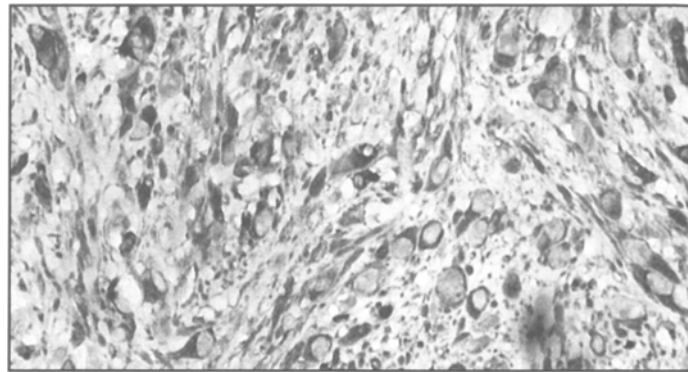


Fig. 4: Microphotograph of SFT showing positive immunoreactivity to vimentin.

The differential diagnosis in the sinonasal tract include epithelial neoplasms, angiofibroma, hemangiopericytoma, schwannoma, fibrosarcoma, spindle cell carcinoma, melanoma etc¹. While most of these neoplasms show heterogenous hyperintensity on T2 weighted images, SFT show predominantly hypointense signal intensity. The characteristic histological and immunological studies can confirm the diagnosis.

In this case, the insidious, long duration for the onset of the clinical symptoms and the CT findings were suggestive of a benign tumour. Complete surgical resection was possible. No local invasion and erosion of the adjacent tissues were seen. Immunohistopathologically, while confirming the diagnosis of SFT, there were no features suggesting malignancy. The patient is symptom free after 11 months of follow up.

CONCLUSION

SFT is a slow growing tumour with a favourable prognosis. It should be included in the differential diagnosis of spindle cell neoplasms of the soft tissue. Malignancy can occur de novo or by transformation within benign or low grade tumour. Therefore, complete surgical excision to obtain clear margin and long term follow up is advisable for these patients.

ACKNOWLEDGEMENTS

The authors are thankful to Dr. K. Sasikumar, Professor and Head of the Dept of ENT, MCH, Alappuzha for his kind assistance and

guidance in the surgical management of this case. The authors are also grateful and wish to acknowledge the help of Dr. K. Ajitha, Professor and Head of the Dept of Pathology, MCH, Alappuzha for providing the microphotographs of the histopathological studies.

REFERENCES

1. Kimta, Brunberg et al, *AJNR, Am J Neuroradiol.* 1996 Oct;17(9):1767-72.
2. Alobid I, Alos L, et al *Acta otolaryngol.* 2003 Jan;(123) (1) 71-4
3. Suny Naito Z et al: *Pathol Int.* 2003 MAY;53(5)284-90.
4. Gold JS, Antonescu et al: *Cancer* 2002 Feb 15 94 (4):1057 68
5. Cassarino DS, Auerbach A et al: *AnnDiag Pathol.* 2003 June 7 (3) 169-73.
6. Pasquini E, Cantorini C et al: *J Laryngol Otol.* 2003 Nov; 117(11): 889-91.

Address for correspondence

Dr. K.V. Rajan
Asst. Professor, Dept. of ENT
MCH, Alappuzha, Kerala State.

Short Communications

ARTERIOVENOUS MALFORMATION AND COLOR DOPPLER : POSTERIOR AURICULAR ARTERY

Rajesh,* S S Bist,** R K Saxena***

Abstract: Arterio-venous malformations (AVM) are rare in head and neck region and are generally arise from intracranial vessels. We present a case of spontaneous AV malformation in the post auricular region with posterior auricular artery as the feeding vessel that was diagnosed by Color Doppler sonography.

Key words: Arterio-venous malformations, Post auricular region, Posterior auricular artery, Color Doppler.