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Solitary fibrous tumour of the nasopharynx

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Abstract
A case of benign 'Solitary Fibrous Tumour of the Nasopharynx', a rare, recently recognized entity, is presented and the clinical and pathological details discussed.

Introduction

Klemperer and Rabin (1931) described for the first time the entity which is now called 'Solitary Fibrous Tumour of the Pleura' or the so-called 'Solitary Fibrous Mesothelioma'. Subsequently it has been known for many years that an identical, if less common tumour can occur in the peritoneum (Stout, 1950; Enzinger and Weiss, 1988; Morson, *et al.*, 1990). That this tumour may also arise in the nasopharynx has, however, been documented only very recently by Witkin and Rosai (1989), who refer to such tumours as 'Solitary Fibrous Tumours of Nasopharynx' (SFTN). We present in this report a patient with a nasopharyngeal tumour of this type which we encountered recently.

Case report

A 45-year-old Indian man presented with a five-year history of progressive bilateral nasal obstruction associated with mucopurulent nasal discharge and anosmia. For the past year it had been noticed that he snored while sleeping. He also complained of bilateral loss of hearing and associated right ear discharge for six months. Posterior rhinoscopy revealed a solid mass that filled the entire nasopharynx producing a bulge in the soft palate. The right tympanic membrane showed a small central perforation; the left tympanic membrane was retracted.

Under general anaesthesia the patient's nasopharynx was examined in Rose's position. The tumour was found to arise from the roof of the nasopharynx by a broad pedicle which was dissected free using a periosteal elevator introduced through the nasal cavity. The entire tumour was removed through the oral cavity.

When the patient was reviewed six months later, in July 1990, he was symptom free; clinical examination of the nasopharynx revealed no evidence of residual or recurrent tumour.

Pathology

The resected specimen consisted of a circumscribed mass of grey-white firm tissue measuring about 5 cm in diameter and weighing about 60 g. The cut surface of the tumour exhibited a whorled and fasciculated appearance similar to that of a leiomyoma.

Microscopically the tumour consisted of randomly interwoven fascicles of collagen producing spindle cells with elongated nuclei (Fig. 1). Cellularity and collagenization were variable but mostly moderate. Nuclear hyperchromatism and pleomorphism were absent (Fig. 2). Only very occasional mitotic figures were found. The tumour was initially interpreted as a neurofibroma but on review was reported as SFTN. It was distinguished from 'fibroma' and fibromatosis by the criteria set forth below (see discussion).

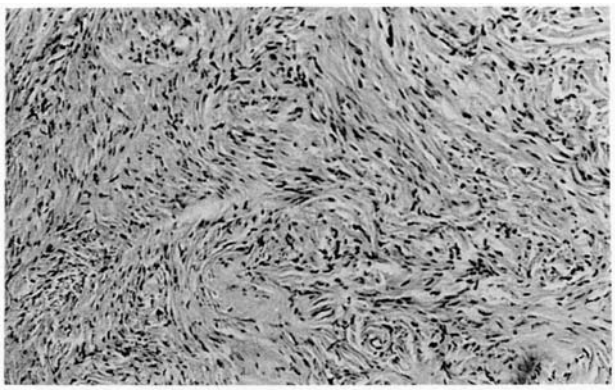

Fig. 1
Randomly intersecting bundles of spindle cells and collagen characterize the solitary fibrous tumour (H&E, ×100)

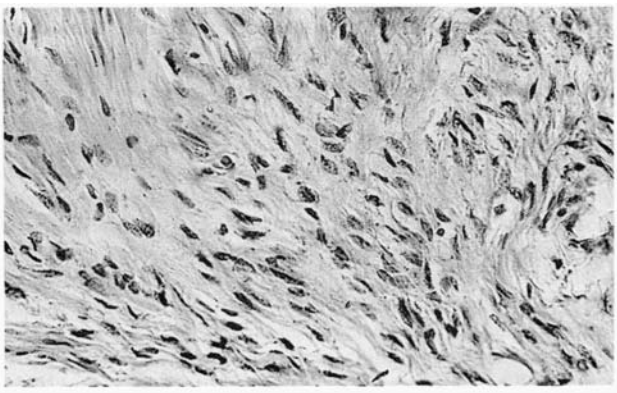

Fig. 2
Higher magnification reveals that the tumour cells have relatively uniform nuclei lacking in significant hyperchromatism and pleomorphism (H&E, ×400)

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Discussion

Benign fibrous proliferations are rare in the upper respiratory tract (Fu and Perzin, 1976). Prior to the documentation of SFTN by Witkin and Rosai (1989), the only types of benign (non-metastasizing) purely fibrous growths that were known to occur in this area were fibromatoses and the so-called 'fibromas' (Fu and Perzin, 1976; Hyams *et al.*, 1988). The former are grossly and microscopically identical to their counterparts elsewhere in the body (Hyams *et al.*, 1988). The former are grossly and microscopically identical to their counterparts elsewhere in the body (Hyams *et al.*, 1988). They can be distinguished from benign SFTN by their infiltrative nature, poor circumscription and relatively more orderly arrangement of tumour cells in sweeping fascicles (Enzinger and Weiss, 1988). However, difficulties are likely to arise if only small amounts of tissue are available for interpretation. The so-called 'fibromas' are generally considered to be reactive rather than neoplastic in nature (Fu and Perzin, 1976; Hyams *et al.*, 1988). These tumours are more easily distinguishable from SFTN because they are characteristically small (usually 1 cm or less in diameter) and composed of mature fibrous tissue containing relatively sparse spindle cells with smaller and more inconspicuous nuclei than are seen in SFTN (Fu and Perzin, 1976).

Apart from the pleura, peritoneum, and the nasopharynx, the solitary fibrous tumour (SFT) has also been reported to occur within the lung (Yousem and Flynn, 1988), pericardium (Dalton *et al.*, 1979), mediastinum (Witkin and Rosai, 1989). The current evidence suggests that this tumour is derived from cells resembling fibroblasts (England *et al.*, 1989; Witkin and Rosai, 1989).

Although our case was clearly benign by histological criteria, it is known that a minority of SFTs can be malignant (Dalton *et al.*, 1979; England *et al.*, 1989). Malignant SFTs are often large and relatively cellular and may exhibit nuclear pleomorphism and increased mitotic activity (Dalton *et al.*, 1979; England *et al.*, 1989; Witkin and Rosai, 1989). On the other hand, circumscription and the presence of a pedicle, as seen in our case, indicate a good prognosis (Briselli *et al.*, 1981; England *et al.*, 1989, Witkin and Rosai, 1989), at least partly because such tumours are more easily resectable (Briselli *et al.*, 1981; England *et al.*, 1989). Treatment of these tumours is by complete local resection wherever feasible, and for benign tumours this is curative (England *et al.*, 1989).

References

Briselli, M., Mark, E. J., Dickersin, G. R. (1981) Solitary fibrous tumours of the pleura: Eight new cases and review of 360 cases in the literature. *Cancer,* **47:** 2678–2689.

Dalton, W. T., Zolliker, A. S., McCaughey, W. T. E., Jacques, J. , Kannerstein, M. (1979) Localized primary tumours of the pleura. An analysis of 40 cases. *Cancer,* **44:** 1465–1475.

England, D. M., Hochholzer, L., McCarthy, M. J. (1989) Localized benign and malignant fibrous tumours of the pleura. A clinicopathologic review of 223 cases. *The American Journal of Surgical Pathology,* **13:** 640–658.

Enzinger, F. M., Weiss, S. W. (1988) Soft tissue tumours. 2nd ed. The C.V. Mosby Company: St Louis, p. 145–153 and p. 706–709.

Fu, Y., Perzin, K. H. (1976) Non-epithelial tumours of the nasal cavity, paranasal sinuses and nasopharynx: A clinicopathologic study. VI: Fibrous tissue tumours. *Cancer,* **37:** 2912–2928.

Hyams, V. J., Batsakis, J. G., Michaels, L. (1988) Tumours of the upper respiratory tract and ear. Armed Forces Institute of Pathology, Washington, D.C., p. 112–114.

Klemperer, P., Rabin, C. B. (1931) Primary neoplasms of the pleura. A report of five cases. *Archives of Pathology,* **11:** 385–412.

Morson, B. C., Dawson, I. M. P., Day, D. W., Jass, J. R., Price, A. B., Williams, G. T. (1990) Morson and Dawson's gastrointestinal pathology, 3rd ed. Blackwell Scientific Publications: Oxford. p 714–715.

Stout, A. P. (1950) Solitary fibrous mesothelioma of the peritoneum. *Cancer,* **3:** 820–825.

Witkin, G. B., Rosai, J. (1989) Solitary fibrous tumour of the mediastinum. A report of 14 cases. *The American Journal of Surgical Pathology,* **13:** 547–557.

Witkin, G. B., Rosai, J. Solitary fibrous tumour of nasopharynx. The upper respiratory tract counterpart of so-called solitary fibrous mesothelioma. (in preparation). Quoted by Rosai, J. (1989) *Ackerman's Surgical Pathology,* 7th ed., **1,** The C.V. Mosby Company: St. Louis, p. 241.

Yousem, S. A., Flynn, S. D. (1988) Intrapulmonary localized fibrous tumour: intraparenchymal so-called localized fibrous mesothelioma. *American Journal of Clinical Pathology,* **89:** 365–369.

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