Solitary Fibrous Tumour Presenting As A Mass In The Nasal Cavity

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Abstract

Solitary fibrous tumours (SFTs), are uncommon spindle cell tumour which typically arises in the pleura in adults. However, they may also arise in other serosal surfaces outside the pleura. The authors present a rare case of a solitary fibrous tumour in the nasal cavity.

INTRODUCTION

SFT is a rare and predominantly benign neoplasm, most often arising from the pleura. There are documented cases of extrathoracic sites including the meninges, mouth, mediastinum, vagina, prostate and bladder. The aetiology of SFTs is unknown. It usually presents in the third and fourth decade of life and is predominantly diagnosed in women. Although SFTs are usually benign, there are reported cases of malignant forms.

CASE REPORT

A 47 year old female presented to the ENT out-patient clinic with a 2-month history of right sided nasal obstruction. This was associated with post nasal drip, but no history of epistaxis. Her past medical history was unremarkable. She was a heavy smoker.

On examination there was polyp like lesion in the right nasal cavity, which was arising above the middle turbinate. The appearance was unusual and not in keeping with a typical allergic polyp. The left nasal cavity and the post nasal space were normal.

In view of the unilateral nature of the mass an urgent computer tomography (CT) scan was organised.

Figure 1

CT scan demonstrated a right ethmoidal polyp, with a suggestion of cribriform plate deficiency. The density of the lesion was not consistent with a meningocele. As there was a possibility of an intracranial extension a magnetic resonance imaging (MRI) was requested.
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**Figure 2**
Figure 2: MRI scan

The MRI with gadolinium enhancement showed that the polyp was arising below the cribriform plate anteriorly, with no evidence of intracranial extension.

The patient subsequently underwent endoscopic excision biopsy of the right nasal mass. A pedunculated polypoid mass measuring 16x35x10mm was removed from the anterior ethmoids. Transverse slices showed a lobulated white and yellow appearance.

**Figure 3**
Figure 3: Clinical picture of solitary fibrous tumour

**HISTOPATHOLOGICAL SPECIMENS**

The tissue biopsy was covered by sinonasal mucosa composed of a proliferation of spindle cells arranged in fascicles.

Immunohistochemistry demonstrated cells strongly staining for CD99 and CD34, with focal staining for BCL2 and CD210. There was no staining with calponin, desmin, caldesmon, S100, smooth muscle actin, GFAP and cytokeratin.

**Figure 4**
Figure 4: Immunohistochemistry showing staining for CD34

**Figure 5**
Figure 5: Immunohistochemistry showing staining for CD99

The histological features were in keeping with a solitary fibrous tumour.

**DISCUSSION**

SFTs were first described in 1931. These rare tumour are frequently an incidental finding on a routine chest X-ray. They usually arise from the visceral pleura. Originally SFTs were thought to originate from mesothelium and therefore...
called local mesothelioma. Later studies revealed that SFTs actually originate from submesothelial soft tissue.

There are documented cases of SFTs in the nasal cavity. Other reported cases in the head and neck region have been reported including, paranasal sinuses, orbit, parotid gland, and parapharyngeal.

Macroscopically SFTs are well circumscribed, pedunculated or sessile tumours. Their microscopic features show clusters of bland spindle cells and a storiform pattern in some areas. They are usually hypocellular with areas of hyalinization and myxoid degeneration. The mitotic count does not exceed 1 or 2 per 10 high power fields. Immunohistochemistry shows SFTs to be strongly positive for vimentin, CD34, and negative for desmin, S-100 and keratin. These findings are consistent with our case.

These benign tumours are slow growing and compress adjacent structures but usually do not invade. The treatment of choice for benign tumours is local excision with complete removal of tumour.

Malignant SFTs are rare. The malignant SFTs exhibit necrosis and high mitosis and are usually more cellular atypical cell morphology. Histologically they have a spindle like nucleus with scattered chromatin, and the margins are not clearly identified.

Malignant SFTs have a high risk of metastases and recurrence, were radiotherapy for metastasis is recommended.

Differential diagnosis of SFTs should include connective tissue tumours such as hemangiopericytoma, sex cord stromal tumours, fibrosarcoma and fibrous pseudotumour.

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