Leiomyoma of the nasal cavity: case report and literature review

S Kumar, W Taylor, AC Swift

CASE REPORT

A 73-year-old man presented with a history of left nasal obstruction and mucosal discharge from the nose for several years. Nasal endoscopy showed a smooth red polyp in the left nasal cavity (*Figure 1*). A computed tomography scan showed the lesion was present in the left nasal cavity and the paranasal sinuses were clear (*Figure 2*). The polyp arose from the left sphenoethmoidal recess and was removed endoscopically. The patient has been followed up for 6 months with no evidence of recurrence.

Macroscopically the tumour consisted of a polypoid mucosal-covered mass measuring 4 x 2.5 x 1.5 cm. The consistency was firm and the cut surface was homogeneous grey-white. Microscopically the lesion comprised interweaving bundles of spindle-shaped cells with ovoid nuclei, mild nuclear pleomorphism and eosinophilic cytoplasm (*Figures 3* and *4*). There was a variable amount of oedematous and fibrous stroma. There was no mitosis or necrosis. Immunocytochemical labelling showed patchy smooth muscle actin, mainly towards the periphery of the tumour and patchy central labelling for S-100 protein, but was negative for caldesmin, CD34, desmin, epithelioid membrane antigen and cytokeratin. The differential diagnosis included benign leiomyoma, benign nerve sheath tumour, solitary fibrous tumour and haemangiopericytoma. The lesion was considered to be a leiomyoma.

INTRODUCTION

Leiomyoma is a rare unilateral benign tumour within the nasal cavity and accounts for 1–2% of all non-epithelial, nasal cavity tumours. The first reported case of leiomyoma was in 1966 and to date the authors are aware of 27 reported cases.

The most common site of this benign smooth muscle tumour is the uterus. Other common sites are the gastrointestinal tract, skin and subcutaneous tissue. Of all known leiomyomas 95% occur in the female reproductive tract, 3% in the skin and 2% in other sites (Weiss and Goldblum, 2001).

Figure 1. Endoscopic view showing polypoidal lesion in posterior left nasal cavity.

Figure 2. Coronal computed tomography scan showing mass in left nasal cavity.

Figure 3. Nasal tumour consisting of interweaving bundles of spindle-shaped cells. Haematoxylin and eosin x 312.

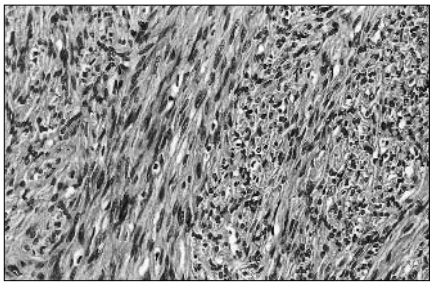
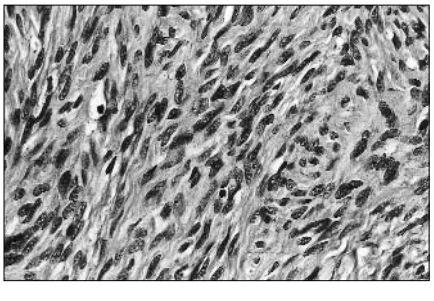


Figure 4. Nasal tumour illustrating mild pleomorphism of the spindle cell nuclei. Haematoxylin and eosin x 500.



The rarity of the tumour within the nasal cavity is thought to be a result of the paucity of smooth muscle in the nose. Smooth muscle is only present in the media of blood vessels and explains why the tumour arises most often from the inferior turbinates (Fu and Perzin, 1975).

Leiomyomas in the nose occur almost exclusively in the middle-aged or elderly and are more common in women (Tang and Tse, 1988).

The tumour occurs so infrequently in the nose that it is likely to be diagnosed only after histopathology; however, the pathologist must be aware of the characteristics and the possibility of this tumour occurring within the nasal cavity. This article therefore presents a case and describes the pathological details relevant to histopathologists.

DISCUSSION

Because of the rarity of leiomyomas, clinicians may not consider the diagnosis and the pathologist may not always be familiar with the typical histological features. In this patient the haematoxylin and eosin stained sections were consistent with leiomyoma, but the presence of S-100 protein and the absence of desmin and caldesmin was unusual.

When the differential diagnosis was considered, the lesion in this patient lacked the pleomorphism and mitoses seen in fibrosarcoma as well as the coagulative necrosis, mitoses and pleomorphism that would characteristically occur in a leiomyosarcoma. The focal S-100 protein positive cells suggested peripheral nerve sheath tumour, but the cells lacked diffuse S-100 staining and

Mrs S Kumar is Specialist Registrar in Ear, Nose and Throat Surgery, **Dr W Taylor** is Consultant Pathologist and **Mr AC Swift** is Consultant Otorhinolaryngologist, Department of Otorhinolaryngology, Head and Neck Surgery, University Hospital, Aintree, Liverpool L9 7AL

Correspondence to: Mr AC Swift

the wavy appearance seen in that condition. Fibromatoses do not have the herringbone appearance seen in this lesion, although they may be positive for smooth muscle actin and, in a minority of cells, for S-100 protein and desmin. Haemangiopericytomas have variable immunohistochemistry, antler-like vascular spaces and perivascular hyaline. Solitary fibrous tumour lacks any discernible growth pattern, often has keloid-like thickened collagen bundles and is diffusely positive for the tumour marker CD34 (cluster of differentiation 34). Although the immunocytochemistry was not typical, the most likely diagnosis was considered to be a leiomyoma.

Most excised leiomyomas occur in the uterus and it is from these tumours that pathological criteria have been defined. Different criteria apply in the gastrointestinal tract and cutaneous tissues. In rare sites, such as the nose, the characteristics of smooth muscle tumours are inferred from their behaviour in other more common sites.

CONCLUSIONS

Leiomyoma of the nasal cavity is a rare benign tumour. To date, 27 cases have been reported in the literature as far as the authors are aware. The tumour probably arises from smooth muscle cells in the walls of the blood vessels. Tumour identification is unique with immunocytochemistry. The recommended treatment of choice is surgical excision with endoscopic surgical resection (Llorente et al, 1996). Recurrence has not been reported after a complete excision (Hanna et al, 1988). HM

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IN THE PUBLIC'S VIEW...

It's not about the money

The *Times* of 23 August, smack in the middle of the silly season, led with a muddled warning about doctors' pensions. That time of year is usually reserved for, first, A levels (Shock: more pupils are passing – standards are falling), shortly followed by GCSEs (Shock: fewer pupils are passing – standards are falling). A levels had come and gone – complete with not just a pretty girl who'd excelled at everything, but pretty triplets who'd each got 3 As and were going to separate Cambridge colleges. In the interim before the GCSE results, the medical press published some worries of senior voices at the British Medical Association, and the *Times* picked them up.

The story was a bit confusing. I'm not sure exactly which consultant contract is 'due to take effect in 2005', but the worry was that consultants approaching retirement would soon find themselves at maximum pension entitlement. One group in 2006, followed by a second in 2007, would get rapid advancement up the pay scale because of the new contract. Having thus achieved their maximum pension they would take the money and run.

This analysis is incorrect. Even with maximum pension, retirement means a halving of income. If the consultants are as money-grabbing as the Times seemed to imply, they are likely to stay on at their much increased pay. While their pensions would not increase, their savings could.

Consultants who want to retire want to do so because they no longer enjoy their work. The immense reward of looking after patients has become sullied by years of politicians telling us that only they know what is good for the NHS. They impress on us the need for evidence-based medicine, but without any evidence impose bureaucratic solutions to difficulties in organization. Even those solutions that were necessary, such as some means of making sure doctors keep up to date, have been muddled and unsatisfactory, their only certain consequence being lots of time and piles of paper.

In the *New Statesman* of 23 August, Clare Beckett wrote an article under the sub-title 'The founder of the NHS would regard Labour's reforms as unspeakably evil'. A letter in the same issue, from an specialist registrar in emergency medicine, criticized Alan Milburn, MP. He, when Secretary of State for Health, wished to restrict the right of consultants to do private practice, and yet is paid £30 000 to sit on the advisory committee of a company providing diagnostic services to the NHS. From other quarters, there are demands that all patients having operations be asked explicitly about whether they would wish to be resuscitated should they suffer cardiac arrest. In some units, process demands that all female patients of child-bearing age having radiotherapy have to sign a consent form confirming they are not pregnant. Process brought a form to a 49-year-old, with lung and brain metastases, who had been in hospital for some months. To some tut-tutting, the clinician declined to give the form to the patient.

This is a small sample of the reason that many consultants want out. And that is before we consider the lack of trainees and the lack of experience of the trainees we have got. Almost all the consultants I know intended to retire at the age of 60 years anyway. An increased salary will not tempt them to stay, but the increased pension is not the reason for retirement. HM

Dr Neville W Goodman is Consultant Anaesthetist at Southmead Hospital, Bristol