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Osseous haemangioma of inferior turbinate

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Abstract
We present a case of osseous haemangioma arising within the inferior turbinate.

Key words: Haemangioma, Cavernous; Nasal Cavity; Turbinates

Introduction

Non-epithelial tumours of the nasal cavity are relatively uncommon. Benign non-epithelial tumours are more common than their malignant counterparts. In a series of 256 cases of non-epithelial tumours of the nasal cavity, Fu *et al*. found 165 to be benign, of these vascular and osseous neoplasms were the most common.[1]

We present a case of a haemangioma arising within the bone of the inferior turbinate in a 25-year-old male, with nasal blockage being the only symptom. To our knowledge osseous haemangioma of the inferior turbinate has not been reported previously in the English literature.

Case report

A 25-year-old male soldier presented to the ENT Department at the Cambridge Military Hospital in Aldershot with a two-year history of bilateral intermittent nasal obstruction, only partly relieved with regular usage of topical nasal steroids. He also complained of sneezing and rhinorrhoea. The patient had no history of epistaxis.

On anterior rhinoscopy the patient had hypertrophied inferior turbinates with the right being larger. His nasal septum was deflected to the left resulting in a markedly reduced nasal airway. It was not possible to perform nasoendoscopy with the 30° Hopkins Rod because of the restricted nasal passages. The patient was subsequently listed for septoplasty and submucous diathermy of the inferior turbinates.

Peri-operatively, it was noted that the right inferior turbinate had grossly expanded to occlude the posterior choana. Septoplasty was performed followed by submucous diathermy of the left inferior turbinate and in view of the unusual appearance of the right inferior turbinate, a biopsy was taken.

Histological examination (Figure 1) revealed an increase in the volume of trabecular bone, the individual trabeculae showing a normal pattern of ossification. There was no histological evidence of osteosclerosis. The inter-trabecular spaces were filled with anastamosing thin-walled vascular channels of cavernous size containing erythrocytes. There was no mitotic activity and the lining endothelial cells were small and normal in appearance. The expanded turbinate bone was covered by intact mucosa, that itself showed no increase in vascularity. A diagnosis of cavernous haemangioma arising within the turbinate bone was established.

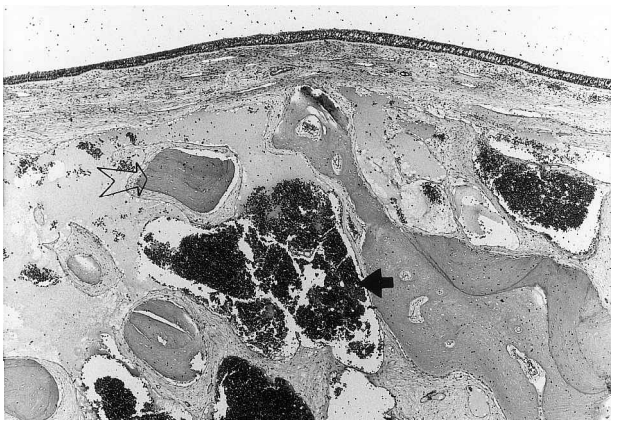

Fig. 1

Microscopic view of the pathologic specimen showing the surface of the lesion with intact respiratory mucosa overlying a proliferation of bony trabeculae (hollow arrow) and vascular spaces (black arrow) in which blood cells have sedimented (H & E; ×40).

In view of the histology, unenhanced computed tomography (CT) scan (Figure 2) was performed to define the extent of the lesion. This revealed a well-defined lesion arising within the bony right inferior turbinate causing lateral bowing of the antral wall and deviation of the nasal septum to the left. Within the mass there was evidence of 'sun burst' spiculation and 'soap bubble' osteoporosis.

As a planned admission the patient underwent surgical excision via a midfacial degloving approach. There was severe lateral bowing of the medial wall of the maxillary antrum that made access to the maxillary artery in the pterygopalatine fossa difficult. Because there was minimal bleeding, it was decided not to clip the maxillary artery. The tumour was completely resected and the cavity was filled with a Whitehead varnish pack.

The pack was removed on the 10th post-operative day under general anaesthesia and the patient made an uneventful recovery. Four months post-operatively he

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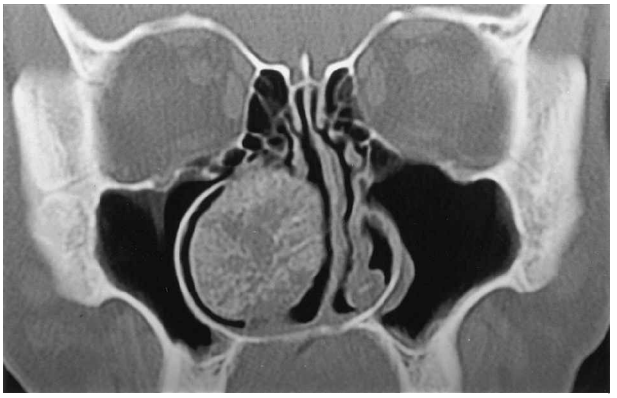

FIG. 2

Coronal CT scan showing the extent of the tumour. Notice the spiculation and 'soap bubble' osteoporosis within the tumour.

remains asymptomatic. Further examination under anasthesia and biopsy of the cavity showed no evidence of recurrence.

Discussion

Haemangioma is a broad term used by the surgical pathologist to describe a diversity of vascular lesions. This includes hamartomas, vascular malformations and, benign tumours.[2]

Cavernous haemangiomas of the turbinates have been described frequently and the vast majority of all reported cases were seen to arise from the mucosa and expand laterally towards the maxilla, and also medially, causing nasal obstruction.[1,3,4]

Osseous haemangiomas in general account for only a small percentage of surgically biopsied or resected bone lesions, however, at autopsy the prevalence of these lesions is very high.[5] Osseous haemangiomas of the nasal bones have been frequently reported.[6–8] Schvarcz reported a case of a giant cavernous haemangioma of the nasal bones measuring 45mm in diameter.[9] Our case is unique because it is an osseous haemangioma arising within the turbinate bone itself with normal overlying mucosa which to our knowledge has not been described in the English literature.

In our case, the CT scan demonstrated spiculation and 'soap bubble' osteoporosis within the turbinate mass. These signs have been documented as the classical diagnostic appearance of haemangiomas of the nasal bone on CT imaging.[10]

There are potential problems associated with haemangiomas of the nasal cavity. They can grow into large mass destroying surrounding structures, obstruct the nasal airway, or cause haemodynamic and coagulation problems.[11] Hence the patient was listed for elective surgical excision. Mid-facial degloving was the approach chosen by the senior author because of the good access it offers to the nasal cavity.

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