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Clinical Records

Haemangioma of the maxillary sinus

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Abstract
Haemangiomas of the maxillary sinus are very rare. In this paper we present one case with an inaccurate pre-operative diagnosis which was treated by entire excision of the tumour. One year after surgery there is no evidence of recurrence. The literature on the topic is reviewed.

Key words: Haemangioma; Maxillary sinus

Introduction

Although haemangiomas are common lesions of the head and neck (Batsakis and Rice, 1981a,b), those of the nasal cavity and paranasal sinuses are rare. A review of the English literature until 1990 revealed only 62 cases of septal haemangiomas and 32 cases of maxillary sinus haemangiomas (Sheppard and Michelson, 1990). However, haemangiomas of the maxillary sinus need to be considered in the pre-operative diagnosis since surgery and even biopsy can lead to a sudden loss of large quantities of blood (Engel *et al.*, 1990).

We report a case of pleomorphic haemangioma of the maxillary sinus and nasal cavity that demonstrated an aggressive behaviour with an initial diagnosis of malignancy.

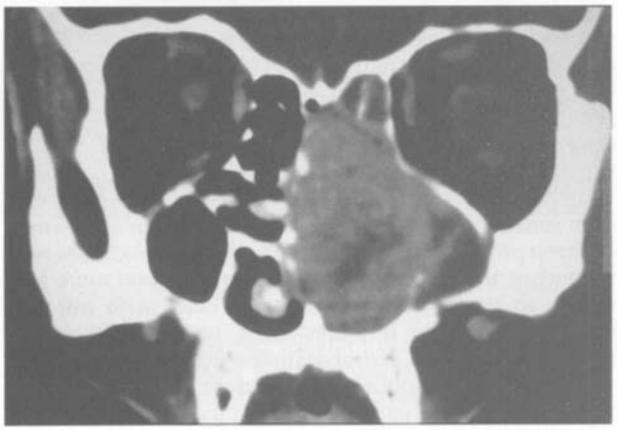

Fig. 1
A coronal CT scan showing the extension of the tumour. Notice the destruction of the medial wall of the maxillary sinus.

Case report

A 78-year-old healthy male presented in June 1995 with a three-month history of recurrent epistaxis, sero-sanguineous nasal discharge, right-sided nasal obstruction and right facial pain. His past medical history was unremarkable.

On anterior rhinoscopic examination, a mass of necrotic appearance filled the entire right nasal fossa, displacing the nasal septum to the left side. There were no other abnormalities in the nasopharynx, ears or throat. General examination and haematological and biochemical tests were normal.

A computed tomographic (CT) scan without contrast (Figure 1) confirmed a mass that filled the right nasal cavity and the right maxillary sinus entirely, with destruction of its medial bone wall, part of the nasal septum and probably the lamina papyracea. The patient refused to sign the consent for the use of contrast in the CT scan. The first biopsy of the tumour was reported as an inflammatory pseudopolyp with necrotic and infected zones. A serious haemorrhage was experienced in the procedure. However, a pre-operative arteriography was not performed because a vascular lesion was not suspected. Indeed, clinical, radiological and histological findings suggested a diagnosis of malignancy.

Complete removal of the tumour was accomplished through a lateral rhinotomy approach with a medial maxillectomy. Intra-operative frozen sections were sent before resection, but our pathologist could not reach a conclusive histological diagnosis. The final diagnosis of haemangioma was only achieved after post-operative histology. During the surgical procedure the mass bled freely but after the entire removal of the tumour there was no exceptional bleeding. Macroscopically, the resected specimen consisted of a very vascular 4 cm-diameter mass with some oval grey nodules. The microscopic appearance of the tumour (Figure 2) showed a proliferation of thin-walled blood vessels of several sizes lined by endothelium.

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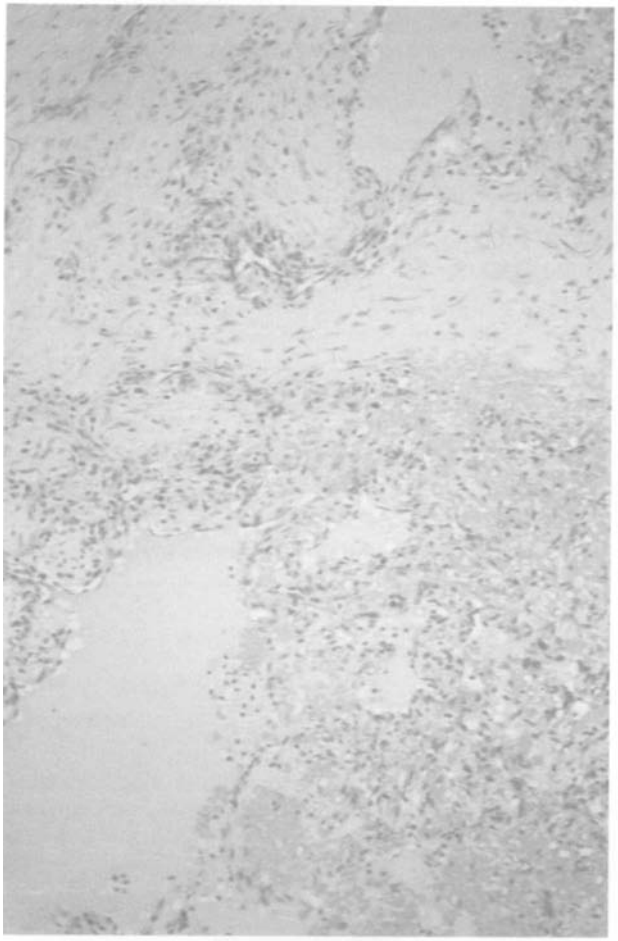

FIG. 2
Microscopic view of the pathological specimen. For comments see text (H & E; × 60).

An histological diagnosis of pleomorphic haemangioma of the right maxillary sinus was made. There was no evidence of malignancy.

A year after surgery, the patient remained healthy without evidence of disease. A posterior septal perforation is the only remaining sequela of the surgery.

Discussion

Haemangiomas are benign vascular lesions (Batsakis, 1984). Over half of all haemangiomas are located in the head and neck region and can originate in the skin, mucosae and deep structures such as bones, muscles and glands. Although the histological findings of all of them are similar, with only minor variations, their clinical features, management and prognosis are different according to their location. Therefore, the classic histological classification in capillary, cavernous and mixed haemangiomas has no clinical relevance (Batsakis, 1984).

For example, the skin and the oral mucosa haemangiomas have similar features; they are the most frequent haemangiomas and normally belong to the capillary group. They appear in the newborn or shortly after birth, have a good prognosis and usually disappear by the age of seven, thus no more than two per cent of them require therapy.

By contrast, the haemangiomas in other parts of the head and neck are comparatively rare and show different behaviour. It has been reported that over 20 per cent of the benign non-epithelial tumours involving the nasal cavity, paranasal sinuses and nasopharynx are capillary haemangiomas. Mean age at diagnosis is 40 years and the most frequent presenting symptoms are nasal obstruction and epistaxis which require an active therapy. Most of them have as the primary site of origin the mucosa covering the anterior end of the nasal septum and less frequently the nasal turbinates. Haemangiomas originating in the turbinates' mucosa are often cavernous and grow in a lateral direction. Thus, we cannot exclude the right inferior turbinate as the site of origin for the haemangioma that we are reporting here. On the other hand, it is known that large lesions of this kind with widespread extension may cause confusion with primary haemangioma of the maxilla or even angiosarcoma (Yasuoka *et al.*, 1990; Dass and Saleem, 1995).

Therefore, these large mucosa haemangiomas can lead towards an inaccurate pre-operative diagnosis. Indeed, haemangiomas originating from the nasal bones or maxilla and angiosarcomas should be differentiated from benign haemangiomas growing from the mucosa of the nasal cavity or the sinuses since clinical behaviour and treatment are different (Ghosh *et al.*, 1988; Kaplan *et al.*, 1991). However, the histopathological differential diagnosis with pre-operative biopsy is often not easy and, moreover, the standard radiological examinations (CT, magnetic resonance imaging (MRI) and arteriography) are frequently of limited help in the definitive pre-operative diagnosis, although they are clearly useful in defining vascular supply as well as bone destruction (Shira, 1983; Kulkamy *et al.*, 1989). It is very important to perform the CT with contrast medium, although in our case it was not possible because the patient refused to sign his consent. Maybe this fact was a relevant factor in the inaccuracy of the pre-operative diagnosis of the lesion.

In our opinion, whenever a large haemangioma is diagnosed pre-operatively, the treatment of choice for these tumours would be pre-operative embolization of the mass followed by a complete excision of the lesion. The surgical approach should be chosen after radiological assessment of the extension and vascular supply keeping in mind that profuse bleeding must be expected, and an unrestricted field of view is advisable in order to control the haemorrhage. Blood transfusion should also be planned in advance.

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