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CASE STUDY

Maxillary sinus haemangioma

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KEYWORDS
Maxillary tumours;
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Abstract
We report the case of 71-year-old woman with no prior history who had a left maxillary mass for 6 months. Axial tomography and nuclear magnetic resonance revealed a lesion of 7.7×6.9×4.7 cm in the left maxillary sinus. Excisional biopsy confirmed the diagnosis of haemangioma.

PALABRAS CLAVE
Tumoraciones maxilares;
Hemangioma

Hemangioma de seno maxilar

Resumen
Paciente de 71 años de edad, sin antecedentes clínicos de interés, valorada por una masa en el hemimaxilar superior izquierdo de 6 meses de evolución. La tomografía computerizada y la resonancia magnética mostraron una lesión de 7,7 x 6,9 x 4,7cm en el seno maxilar izquierdo. La biopsia escisional confirmó el diagnóstico de hemangioma.

Introduction

Haemangiomas are benign vascular tumours characterized by rapid vascular proliferation. Currently, vascular lesions are divided into haemangiomas and vascular or lymphatic malformations.[1] The main difference between hemangiomas and vascular malformations is that cell turnover is increased only in the former.

Furthermore, we found differences in biological behaviour; vascular malformations that are present since birth grow rapidly and do not regress spontaneously. In contrast, haemangiomas are present in 80% of cases since birth, undergo rapid growth during the first 12 months of life and a slow regression after that age, and conclude with minimum deformities.[1,2]

Despite the high incidence of head and neck haemangiomas (60% of the total), those located in the sinonasal region are rare; those originating in the sinus mucosa, such as the case we present, are extremely rare.[3]

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Case study

Female, 71-years-old, examined in oral and maxillofacial surgery consultation for a tumour in the upper right maxilla of 6 months of evolution, as reported. The patient presented mild epiphora of the right eye as the only symptom.

Upon intraoral physical examination, a depressible tumour was observed, located in the right upper maxillary, destroying the cortical bone and protruding into the vestibular mucosa. Extraorally, it produced obvious deformity and asymmetry (Figure 1).

Fibroscopy showed the right nostril completely obliterated by movement of the lateral nasal wall. The mucosa and turbinates presented a normal appearance. The orthopantomography (OPG) showed a unilocular and radiolucent lesion which occupied the entire right maxillary sinus. Computed tomography (CT) and magnetic resonance imaging (MRI) (Figure 2) revealed a tumour of 7.7×6.9×4.7 cm, with signs of expansiveness and heterogeneous density, which occupied the right maxillary sinus and the alveolar process of the maxillary, extending to the orbit and frontal ethmoid and sphenoid cells on that side. Based on these results, it was not possible to establish the nature of the maxillary injury, which could correspond either to a superinfected benign tumour or to a malignant tumour with central areas of necrosis. Body MRI did not show other alterations. Incisional biopsy was performed (under local anaesthesia and in consultation, as there was no previous data indicating that the injury was of vascular origin), and the result was not conclusive according to the pathological study.

The patient was intervened under general anaesthesia through a Caldwell-Luc approach for excision of the tumour in its entirety. The final histology study confirmed vascular proliferation in the tissue, compatible with hemangioma.

Figure 1 Image of the patient with a clear facial asymmetry.

Figure 2 MRI showing the large right maxillary tumour.

The postoperative evolution was satisfactory, as epiphora disappeared and facial symmetry was recovered. Two years after surgery, no signs of recurrence are observed.

Discussion

Haemangiomas are the most common tumours in childhood. Approximately 60% are located in the head and neck, either at cutaneous or mucosal level or in deeper structures, such as muscle or bone.[4,5]

Sinonasal haemangiomas, unlike the rest, appear in adulthood and do not regress spontaneously, thus compressing and destroying neighbouring structures.[3] The most common age of presentation is the fourth decade of life. They are more common in women (3:1).[1,6]

The most common symptoms when the hemangioma is located in the nasal region are epistaxis and nasal obstruction. However, when the location is the maxillary sinus, the condition is usually asymptomatic. Other possible symptoms include local pain or bleeding gums. Differential diagnosis with other tumours typical of the sinus cavities, both benign and malignant (jaw cysts, inverted papillomas, mucoceles, malformations, and other vascular tumours),[7] must be carried out.

In simple radiology, occupation of the sinuses by a mass of fatty density is found. CT and MRI define the extent of the tumour and the possible affectation of nearby structures and help the differential diagnosis with vascular malformations.[8,9] MRI is used to rule out visceral affectation.[1] Arteriography is indicated in rare cases; it is used in cases where, either from excessive lesion size for surgical approach or from important systemic implications, the possibility of embolisation is considered as part of the treatment.[10]

The definitive diagnosis is obtained by the biopsy (incisional when the location is accessible and excisional in the same surgical procedure as the treatment for larger sizes or deeper locations). Any complications such as

bleeding, infection, compression of nearby structures, or secondary bone deformities, as well as psychological stress, are an indication for treatment.

A wide variety of treatments exist. Among the non-invasive, corticosteroids (systemic or intralesional) and interferon alpha-2 can be found, with results which are acceptable but not without secondary effects.[1] In large tumours involving vital structures such as the skull base or in those with no evidence of complete excision, a treatment with radiotherapy has been described, although its usefulness is under discussion.[10]

Among the invasive treatments, surgery is the main choice. The approach must be adjusted to the location and size of the tumour. Less aggressive techniques can be opted for, such as endoscopic surgery, and more radical techniques such as Caldwell-Luc approach or hemimaxillectomy with reconstruction in cases with more extensive maxillary affectation.[11] The most important complication during surgery is bleeding.

If there is evidence (through a prior arteriogram) of a nutrient vessel of good size, embolisation can be performed before surgery to reduce tumour size to a minimum.[12,13]

Techniques such as photocoagulation or cryotherapy have not been proven effective in areas having the depth of the maxillary sinus.[1]

Conflict of interests

The authors declare no conflict of interests.

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