

Cavernous intra parotid hemangioma: a rare etiology of parotid tumors

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ABSTRACT

Cavernous hemangiomas are vascular lesions representing low proportion of all parotid tumors. They are often taken on behalf of other parotid tumors such as pleomorphic adenoma before being operated on. We report the case of a 23-year old male with no medical history, who was complaining of painful right parotid swelling, which appeared during the past 10 months. Magnetic Resonance Imaging (MRI) revealed the presence of tumor in the superficial lobe appearing in low signal on T1-weighted image and high signal on T2 and enhancing heterogeneously evoking a vascular tumor. A parotidectomy was performed for excision of the superficial lobe of the right parotid gland. The facial nerve was dissected and preserved. Pathology confirmed the diagnosis of cavernous hemangioma. The evolution was favorable with no recurrence, during 8 years of follow-up.

Key words: Cavernous hemangioma, vascular tumor, parotid gland, parotidectomy

INTRODUCTION

Hemangiomas are vascular lesions that are often found in children. In the head and neck, 90% of salivary gland hemangiomas are located in the parotid gland [1].

They are rare in adults and the cavernous type is the only type described in the literature. It is a rare diagnosis of a parotid mass and represents 0.4 to 0.6% of all parotid tumors. For this reason, they are often taken on behalf of other parotid tumors such as pleomorphic adenoma before being operated on.

We report the case of a young adult operated in our department for a parotid tumor, after histopathological examination, related to a cavernous hemangioma.

OBSERVATION

This is a 23 year old patient, with no medical history, complaining of painful right parotid swelling, which appeared during the past 10 months. The swelling was not related to meals. On examination, this swelling was 2 x 2 cm size, firm, mobile and painful.

There was no homolateral facial paralysis or parapharyngeal bulge, the homolateral Stenon orifice was free and there was no palpable cervical lymphadenopathy.

This formation was located at the superficial parotid lobe on ultrasound examination, and showing heterogeneously echogen, predominantly hypoechogen, and non vascularized at Doppler examination.

On magnetic resonance imaging, the tumor appeared in low signal on T1-weighted image and high signal on T2, enhancing heterogeneously.

A parotidectomy was performed for excision of the superficial lobe of the right parotid gland. The facial nerve was dissected and preserved. Pathology showed a well circumscribed mass composed of multiple large dilated vascular channels containing red blood cells.

The evolution was favorable without recurrence, during 8 years of follow-up.

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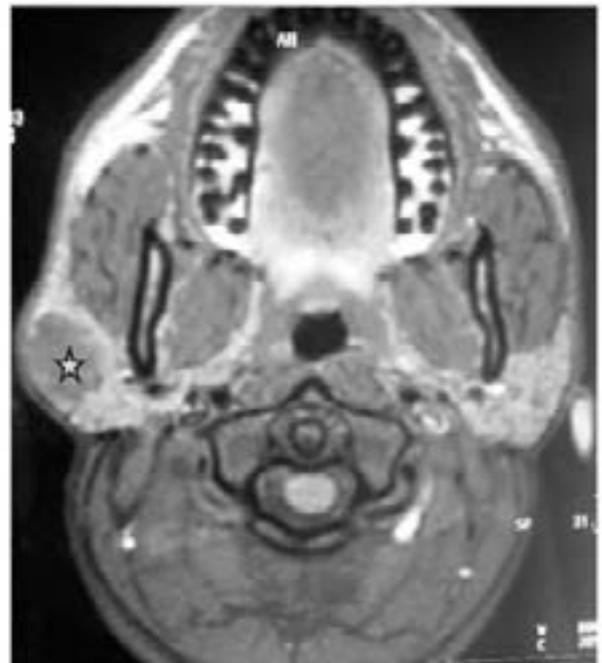


Figure 1 : Parotid MRI, axial T1-weighted section showing right parotid lesion in T1 hyposignal close to muscle signal

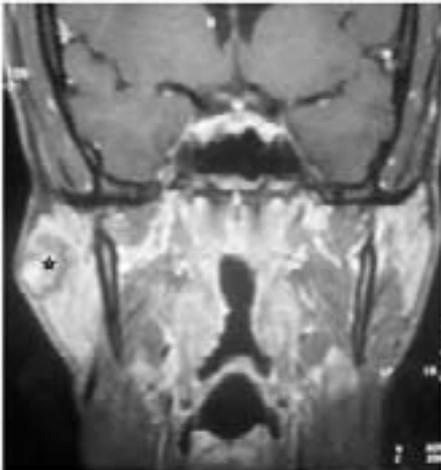


Figure 2 : Parotid MRI, T2-weighted coronal section, showing parotid lesion on T2 hypersignal



Figure 3 : Parotid MRI, coronal section in injected T1 sequence, showing right parotid lesion with heterogeneous enhancement

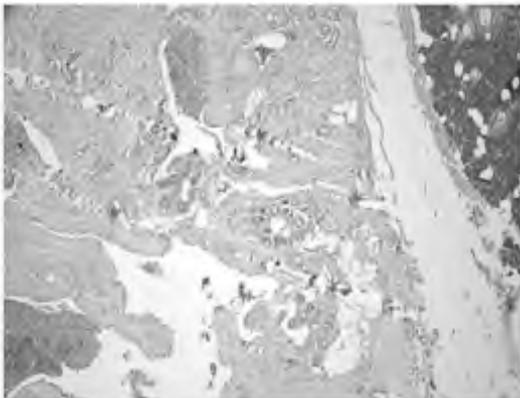


Figure 4 : Benign tumoral proliferation made of vascular structures of variable size with thickened wall with regular epithelial border in relation to a cavernous hemangioma of the parotid.

DISCUSSION

Hemangiomas are benign vascular tumors characterized by proliferation and turnover of endothelial cells. They are one of the most common soft tissue tumors (about 7% of benign tumors). In the head and neck, they can affect the skin, muscles and salivary glands [1]. In adults, hemangiomas are rare, only a few cases have been reported in the literature and the cavernous type is the only one described so far [2].

About 50 cases have been reported worldwide [3]. They appear to be twice as common among women as men. Clinical examination signs are not very specific. They are in the form of a parotid mass of slow growth, soft or firm, mobile and painless. More rarely, there are skin lesions (macules and / or papules red, bluish or blue), and a vibration or pulsation during palpation [4]. On ultrasound, hemangiomas are heterogeneous hypoechoic lesions in which calcified phleboliths are identifiable [5]. Magnetic resonance imaging is the complementary examination of choice in their exploration. Hemangiomas generally appear as a lobulated lesion with a T1-weighted image, hyper-intense T2 signal with homogeneous enhancement and empty signal areas within the lesions [6]. It thus makes it possible to suggest that the tumor is a hemangioma and to study its extensions. Histologically, cavernous angiomas consist of dilated, blood-filled vessels edged with flattened endothelium. The vascular walls are sometimes thickened by adventitial fibrosis. Calcifications are common. Several syndromes may be associated with cavernous hemangiomas, Kasabach-Merritt syndrome (large cavernous hemangioma associated with thrombocytopenic purpura, intravascular coagulation and platelet sequestration in the tumor) is the most severe [7,8].

The therapeutic options for cavernous haemangiomas in adults are limited to the opposite of infantile haemangiomas that can be treated medically (sclerotherapy, corticosteroids, propranolol ..). Their treatment is exclusively surgical [9]. Selective pre-surgical embolization is suggested to minimize blood loss [3,10]. Before surgery, the vascular supply of the tumor should be analysed by angio MRI [11]. If for small lesions, surgical excision poses little difficulty, in extensive lesions the facial nerve may be difficult to identify and should be monitored intraoperatively. Recently, expression of COX2 in endothelial cells lining vascular spaces has been reported, suggesting that high doses of celecoxib would inhibit cell proliferation of angiosarcoma cell lines. It could therefore be considered as a new therapeutic line research for tumors of vascular origin [12].



CONCLUSION

Cavernous hemangioma in adult is a rare pathology of the major salivary glands. It is a diagnosis of parotid tumors that should not be ignored. Clinical and radiological findings make it possible to evoke it. Surgery is nowadays, the attitude of reference. In adults the prognosis after surgery is excellent; there have not been reported cases of hemo-

dynamic complications or recurrence. Medical research is needed to help finding alternatives to surgery as a therapeutic option.

Conflicts of interest: Authors have declared that no competing interests exist.

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