A Rare Case of an Infra Temporal Cavernous Hemangioma (Case Report and Literature Review)

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Introduction: Hemangiomas are benign vascular tumors, secondary to the abnormal development of embryonic vascular structures, affecting the cervico-facial region in 20% of cases, however infra-temporal localization remains rare. 

Observation: We report the case of a 17-year-old patient, admitted to our service for a swelling of the right hemisphere evolving for several years, of firm consistency, painless at palpation, not adhering to the cutaneous plane and progressive evolution. MRI revealed a right temporal-jugal lesion process in the infra-temporal pit measuring 122x43x41mm without infiltration of surrounding structures. After preparatory embolization the surgical removal was carried out by a double way first temporal and endobuccal which allowed the removal of the tumor in monobloc, the anatomo-pathological examination returned in favor of a cavernous hemangioma. The surgical suites were simple with a 9-month recoil with no sign of recurrence. 

Discussion: Hemangiomas are characterized by multicentric proliferation of endothelial cells and are classified, according to their histological appearance, into capillary, cavernous or mixed hemangiomas. MRI is considered the study of choice for hemangiomas because it determines very precisely the extent of the lesion and its relationship to the adjacent structures. The certainty diagnosis is histological. The reference treatment combines embolization preoperative followed by complete surgical removal.

Keywords: Hemangioma, Vascular Tumor, Infratemporal Tumor.

INTRODUCTION

Hemangiomas are benign vascular tumors, secondary to the abnormal development of embryonic vascular structures, they are also described under the terms angiolipomes, angiofibrolipomes or hamartomes and are classified, according to their histological appearance, capillary, cavernous or mixed hemangiomas [1].

Cavernous haemangioma is the most common type in adults. Cervico-facial localization is classic [2, 3]. However the primitive infra-temporal seat remains exceptional.

OBSERVATION

A 17-year-old patient, with no significant pathological history, admitted for swelling of the right hemisphere (Fig. 1) gradually evolving for six years, of firm consistency, painless palpation, measuring 13cm in its long axis, adhering to the deep and mobile plane in relation to the skin plane, without restriction of mouth opening, or facial paralysis.

CT showed a poorly encapsulated tumor process, with bumped, polylobed contours, little enhanced after contrast injection, containing calcifications.

Occupying the right chewing space and pushing back the zygomatic arcade without bone lysis. (Fig. 2). The MRI showed, a right, heterogeneous, polylobe, temporal jugal lesion process, containing cystic zones, in T1 hyposignal, T2 heterogeneous hypersignal and FLAIR, diffusion isosignal, raised slightly heterogeneously after gadolinium injection. It measures: 122x43x41 (Hxtxap) (Fig. 3).

It occupies the right infra-temporal pit, or it pushes back the Bichat fat ball, encompasses the tendon of the temporal muscle, compress inside the maxillary sinus without invading it and comes into contact with the lateral pterygoid muscle that it pushes down and back. At the bottom, it spreads to the chewing space and pushes back the right masseter muscle out which is compressed. At the top, it extends to the right outer temporal pit. Surgery was performed 24 hours after preoperative embolization, using a dual pathway first...
Temporal allowed the dissection of the temporal portion of the tumor to the zygomatic arcade (Fig. 4) Endobuccal allowed release of jugal portion (Fig. 5).

Then release the portion infatemporal, passing the tumor mass under the zygomatic arch which was pushed forward and out by the tumor and the extraction of the tumor by the first endobuccal (Fig. 6) in monobloc (Fig.7). The anatomopathological study confirmed the diagnosis.
DISCUSSION

Hemangiomas are benign vascular tumours, secondary to the abnormal development of embryonic vascular structures [4, 5]. They most often affect the trunk and extremities; in 20% of cases, the location is cervicofacial, these are benign, congenital tumors, which can remain dormant for a long time. In more than 50% of cases, they are likely to develop spontaneously during the second or third decade [5]. In our case, the swelling had been evolving for six years in a 17-year-old subject.

Various additional exams (ultrasound, CT, MRI, angio-MRI and arterography) can be performed for the diagnosis of hemangioma. They are most often used to confirm the vascular nature of the lesion, but the diagnosis of certainty is made by histological examination [6, 7].

The MRI is considered the study of choice for the examination of hemangiomas because it very precisely determines the extent of the lesion and its relationship to adjacent structures [3-7]. Hemangioma is characterized by an iso or a T1 hyposignal, a very evocative hypersignal in a T2-weighted sequence [3, 5].

For the differential diagnosis of hemangiomas, in front of imaging data, a malignant soft tissue tumor, especially rhabdomyosarcoma, may be suspected [5-7].

Several treatments are offered: radiotherapy, systemic or intralesional corticotherapy, intralesional injection of sclerotic product, cryotherapy, vessel ligation, embolization and surgical removal [1, 5, 8].

Radiotherapy is not recommended only for recurrences beyond the scope of surgery [5, 8]. Preoperative embolization reduces the risk of intraoperative bleeding.

Complete surgical removal is the treatment of choice because it gives the best results [1, 5, 8, 9]. However, Wolf et al. and Tang et al. reported recidivism rates of 18% and 19% respectively after complete removal [5].

Surgery is indicated for tumors that are bulky or that invade adjacent structures, causing pain, functional disorders (trismus, nasal obstruction...) or facial deformation [1, 8].

The first surgical step of the infra-temporal pit is delicate because of the anatomical complexity and the difficulty of access of this region [1, 9, 10].

Two pathways first, lateral and anterior can be used to access the infra-temporal pit. Lateral approaches include the transzygomatic and transparotid pathways, with the main complication of facial paralysis [1, 10]; the anterior pathways include the transpalatine and transmaxillary pathways (first way to Caldwell-Luc). These are usually indicated for biopsy and, in some cases, for removal of small lesions

REFERENCES