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Scarifications: Rare Cause of False Aneurysms of the Superficial Temporal Artery: About One Case and Literature Review.

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Introduction:

The false aneurysms of the superficial temporal artery (STA) are rare and usually occur after a direct trauma to one of its branches. It is characterized by a localized rupture of the vascular wall. Their diagnosis is made on clinical history and clinical examination, and the treatment is based on surgery.

Case report:

A 56-year-old woman with hypertension, diabetes, dyslipidemia and ischemic stroke in result of a permanent left hemiplegia was referred to us for a left pulsatile temporal mass having evolved for 3 months .The diagnosis was made on clinical history (the history of scarification in the left temporal area) and on clinical examination (a 2 cm formation is palpated on the path of the left Temporal artery which was pulsatile). The ultrasonography showed a pulsatile vascular formation in continuity with temporal artery. The diagnosis was confirmed histologically, and the treatment was surgical: the STA was ligated proximally and distally and the pseudoaneurysm was resected.

Discussion:

ATS is the terminal branch of the external carotid artery which is exposed to trauma in its juxta-osseous subcutaneous pathway in the craniofacial area.

The false aneurysms of the STA are, however, rare [1, 2]. It is more common in men (80%), between 20 and 40 years (60%) than women [1].

Pseudoaneurysms arise from a disruption in arterial wall continuity resulting in three quarters of cases from closed-head injury trauma, or iatrogenic causes such as plastic surgery, neurosurgery, maxillofacial surgery, or secondary to post-traumatic necrosis of the artery [5].

The average delay of diagnosis is a few weeks [4].

In the case of our patient, the diagnosis was made two weeks after the scarification Clinical diagnosis is easily made on pulsatile painful mass and with a traumatic history. Also, the compression of the proximal STA should reduce pulsation. However, diagnosis of this entity may be overlooked if these physical findings are not present so in that case radiological imaging plays a major role in obtaining a diagnosis and in eliminating other causes of pulsatile tumors that can be found in this area such as hematoma, abscess, lipoma, meningocele .. etc.

The ultrasonography shows a perfused sac that communicates with arterial lumen and indicates its size. It shows the presence of an intra-aneurysmal parietal thrombus and measures the blood flow. The study of the flow state, at best appreciated with duplex ultrasonography, highlights intra-aneurysmal turbulence.

The cranial CT scan with intravenous contrast shows the extravasation of this contrast agent within the hematoma, fed by the ATS. It specifies the size of the hematoma and

the existence of a possible aneurysmal intraluminal thrombosis [4].

MRI is also a non-invasive method for detecting arterial injury after trauma.

Surgery has been recommended as the treatment of choice. Surgical treatment remains the treatment of choice for these false aneurysms. It involves surgical closure of the ATS after resection of the aneurysm.

This procedure may be carried out under local anesthesia but may require general anesthesia. Therapeutic alternatives to obtain aneurysmal thrombosis have been proposed: ultrasound-guided thrombin injection [4], echo-guided compression of ATS [5], endovascular repair using coil embolization [6].

Conclusion:

The diagnosis of ATS false aneurysm is eased and its therapeutic approaches is simple. The false aneurysms can be distinguished from true aneurysms by rupture of the vascular wall. The diagnosis made on Clinical history requires awareness of the initial trauma often passed unnoticed. Clinical examination and possible radiological imaging eliminate the other pulsatile tumors of this area (true aneurysm of the ATS or of the meningeal artery).