



CASE REPORT

Superficial Temporal Artery Aneurysm

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Abstract

The superficial temporal artery aneurysm is a rare pathology. We report the case of a 7-year-old child who consulted for a beating mass on the left forehead. The doppler ultrasound and The CT angiography confirmed the diagnosis of a superficial temporal artery aneurysm. The treatment was surgical and the postoperative course was simple.

Keywords

Superficial temporal artery, Aneurysm, Surgery

Introduction

An aneurysm is defined as an increase in the diameter of a vessel than 1.5 times. It can be fusiform involving the body of the artery or sacciform. A true aneurysm involves all the layers of the vessel wall unlike the pseudoaneurysm in which the expansion involves only the outermost layer of the arterial wall [1].

The temporal artery aneurysms represent 1% of arterial aneurysms. The pseudoaneurysms rank first (95%) while true aneurysms are extremely rare (5%) [2].

Case Report

A 7-year-old child with no pathological history consulted for a swelling on the left forehead evolving for 3 weeks (Figure 1). On examination, it is a beating and expansive mass. The CT angiography confirmed the diagnosis of a left superficial temporal artery aneurysm measuring 1.5 cm in diameter (Figure 2). He was operated under general anesthesia. He had an aneurysm excision by ligature section. The anatomopathological examination of the specimen showed a muscular artery presenting on one side of



Figure 1: Left forehead swelling.

its wall a sacciform aneurysmal dilation marked by the total destruction of the media with interruption of the internal elastic lamina. The cavity is filled with a fibrino-cruoric thrombus adhering to a largely abraded intima.

The media and the intima are replaced by hemorrhagic and inflammatory connective tissue. The adventitia shows a rich capillary neovascularization. The wall resumes a normal morphology and caliber on either side of this aneurysm.

Discussion

The first case of superficial temporal artery aneurysm was described by Thomas Bartholin in 1740 [3].



Figure 2: The CT angiography showed a left superficial temporal artery aneurysm measuring 1.5 cm in diameter.



Figure 3: An intraoperative view of the aneurysm of the left superficial temporal artery.

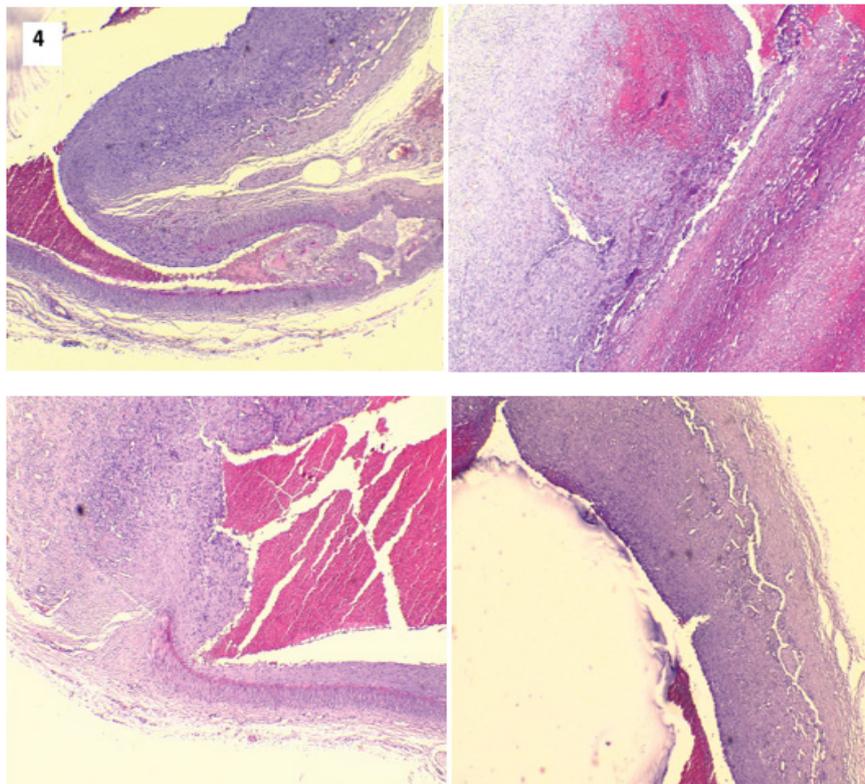


Figure 4: Histological examination of the aneurysm which showed: the appearance of the neck of the aneurysm and the interruption of the internal elastic limit and of the media.

The clinical expression is a beating swelling on the forehead. The main differentials diagnosis include arteriovenous fistula, abscess, parotid gland lesion or soft tissue tumor [4].

The radiological explorations include Doppler ultrasound and CT angiography. These examinations are not mandatory for diagnosis but may reveal other synchronous lesions [5].

The treatment of a temporal artery aneurysm is often surgical [6]. It consists in the resection of the aneurysmal sac with double ligation of the proximal and the distal ends [7,8]. The endovascular techniques have been described either by ultrasound-guided direct injection of thrombin [9] or embolization [10]. The endovascular intervention is preferable when the facial nerve is close to the parotid gland [4].

Conclusion

The diagnosis of an aneurysm of the superficial temporal artery is clinical. It must be evoked in front of a beating mass of the forehead. The treatment is in most cases surgical.

References

1. Norman PE, Powell JT (2010) Site specificity of aneurysmal disease. *Circulation* 121: 560-568.
2. Fox JT, Cordts PR, Gwinn BC (1994) Traumatic aneurysms of the superficial temporal artery. *J Trauma* 36: 562-564.
3. Desanti L (1884) Des tumeurs anev. De la région temporale. *Arch Gen Med* 154: 543-679.
4. Bozkurt G, Ayhan S, Cakici N, Celik O, Ziyal IM (2011) Spontaneous nonpulsatile aneurysm of the superficial temporal artery mimicking a subcutaneous mass lesion. *J Craniofac Surg* 22: 371-372.
5. Apruzzi L, Bossi M, Bugna C, Bertoglio L, Chiesa R (2021) Giant post-traumatic pseudoaneurysm of the superficial temporal artery. *Ann Vasc Surg* 70: 566.e11-566.e14.
6. Nnadi MON, Bankole OB, Arigbabu TO (2013) Superficial temporal artery pseudoaneurysm: A report of two ruptured cases and review of literature. *East Cent Afr J Surg* 18: 168-174.
7. Pipinos II, Dossa CD, Reddy DJ (1998) Superficial temporal artery aneurysms. *J Vasc Surg* 27: 374-377.
8. Ayling O, Martin A, Roche-Nagle G (2014) Primary repair of a traumatic superficial temporal artery pseudoaneurysm: case report and literature review. *Vasc Endovascular Surg* 48: 346-348.
9. Partap VA, Cassoff J, Glikstein R (2000) US-guided percutaneous thrombin injection: A new method of repair of superficial temporal artery pseudoaneurysm. *J Vasc Interv Radiol* 11: 461-463.
10. Hong JT, Lee SW, Ihn YK, Son BC, Sung JH, et al. (2006) Traumatic pseudoaneurysm of the superficial temporal artery treated by endovascular coil embolization. *Surg Neurol* 66: 86-88.