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Case Report

Vascular hamartoma in the distal region of the anterior face of the left forearm, a rare lesion: a case report

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ABSTRACT

The word hamartoma is derived from the Greek word hamartia meaning "to err" or "to blame", with the addition of "-oma" denoting a tumor-like growth. Hamartomas are non-malignant tissue malformations characterized by defective dissemination of fully differentiated cells and soft tissue native to the affected organ. If the tissues involved are composed of blood vessels, they are called vascular hamartomas. In our manuscript we describe the case of a 16-year-old adolescent with the presence of a tumor in the distal region, anterior face of the left forearm, who underwent an excisional biopsy with histopathological report of vascular hamartoma, currently with adequate postoperative evolution. The most commonly reported site of occurrence of vascular hamartomas is on the face and they are generally asymptomatic and silent at different stages of life. The definitive diagnosis for this type of pathology is by histopathology. Vascular hamartomas are a rarely reported benign pathology, due to their low incidence, this can make timely diagnosis difficult, as well as the ideal treatment for these patients.

Keywords: Hamartoma, Vascular hamartoma, Non-malignant tumor

INTRODUCTION

The word hamartoma is derived from the Greek word hamartia which means "to err" or "to blame", with the addition of "-oma" which denotes a tumor-like growth. They are non- malignant tissue malformations that are characterized by the defective propagation of fully differentiated cells and native soft tissues of the affected organ. If the tissues involved are made up of blood vessels, they are called vascular hamartomas.[1,2]

They are usually asymptomatic and incidentally identified lesions. The most common sites of appearance of hamartomas in general are the lungs followed by the gastrointestinal tract, liver, skin, chest wall, and kidneys. In contrast, vascular hamartomas, the most common reported site of appearance is the face and these can arise from any of the 3 main germ layers: ectoderm, mesoderm and endoderm, usually with a predominance of one of them.[3]

CASE REPORT

We present the case of a 16-year-old adolescent who attended the reconstructive plastic surgery clinic due to the presence of a tumor in the distal region, anterior face of the left forearm of 8 years of evolution, accompanied by mild pain on digital compression, without other accompanying symptoms. On physical examination, the tumor was approximately 2 cm wide × 5 cm long, mobile, not adhered to deep planes, and did not present signs of median nerve compression. A Doppler ultrasound was performed,

reporting a probable arteriovenous fistula, for which an evaluation was requested by the vascular surgery service, who ruled out said pathology due to the clinical findings not consistent with the imaging study.

A simple computerized axial tomography of the left upper extremity was requested, which reported a delimited tumor, without adhering to important structures, with a tendency to compress the median nerve. It was decided to initiate a pre-surgical protocol for excisional biopsy.

Ambulatory surgery was performed starting with a "Z" incision in the distal region, anterior face of the left forearm, releasing triangular flaps and dissecting until locating the tumor which was in the superficial plane (Figure 1), freeing carpal tunnel structures, finding intact median nerve, as well as tendon of the superficial flexor of the fingers and long flexor tendon of the thumb (Figures 2 and 3).

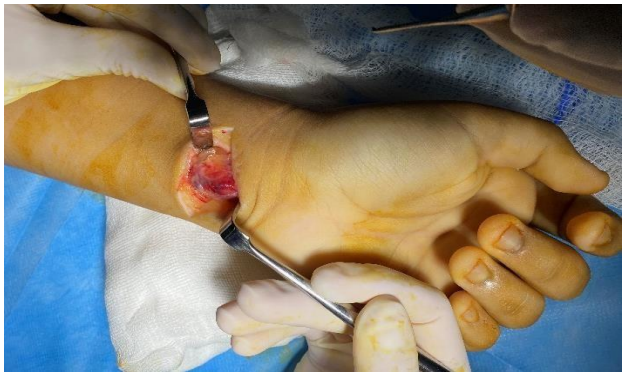

Figure 1: Finding of the vascular hamartoma in the superficial plane of the distal region of the anterior aspect of the left forearm.

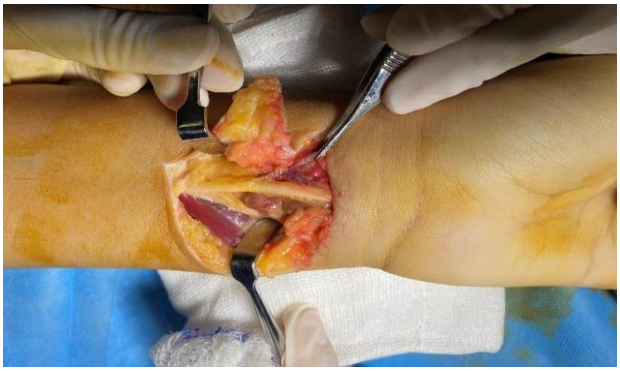

Figure 2: View of the median nerve intact and free of tumor.

The entire tumor was dissected, finding it vascularized, spindle-shaped, soft in consistency, reddish-brown in color, with well-defined edges, with dimensions of 5.5×2.5×2 cm (Figures 4 and 5).

The piece was sent for histopathological study, reporting a lesion made up of a large number of vascular lumens, some with venous-type walls and others arteriolar, ectatic and deformed, with proliferation of adipocytes and hyaline stroma, being diagnosed as vascular hamartoma.

He is currently with adequate post-surgical clinical evolution, continuing in surveillance and outpatient management with the reconstructive plastic surgery service.

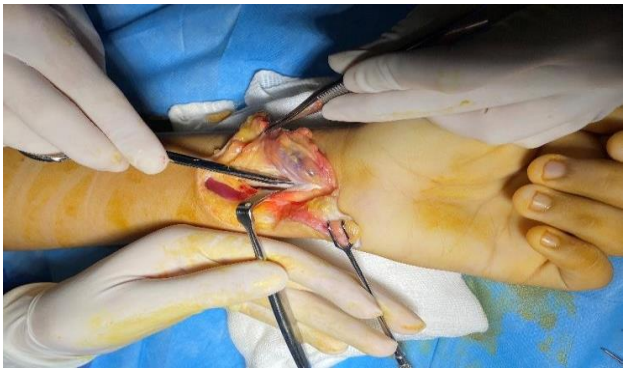

Figure 3: View of the flexor digitorum superficialis tendon and flexor pollicis longus tendon intact and free of tumor.

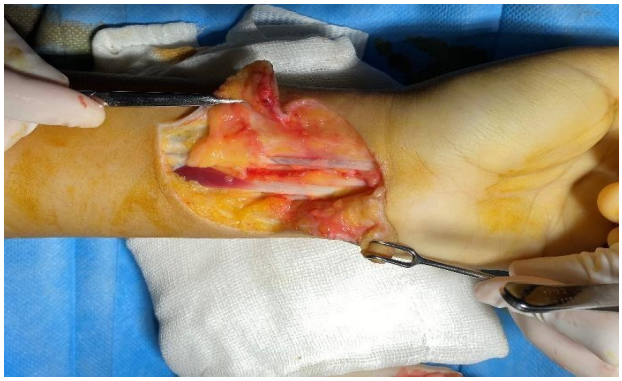

Figure 4: Total dissection of the vascular hamartoma.

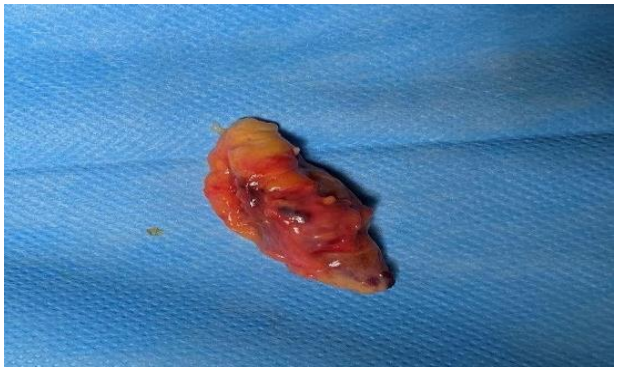

Figure 5: View of the removed vascular hamartoma.

DISCUSSION

Albrecht was the first researcher to coin the term "hamartoma" in 1904. Hamartoma refers to a lesion that

results from an error in embryological development and is characterized by an abnormal arrangement of tissues indigenous to an organ. Hamartomas and teratomas derive from all three embryonic layers; however, the tissues present in the latter do not originate from the affected organ, which differentiates them from hamartoma.[5,7] There are several types of vascular hamartomas, such as cavernous angiomas, telangiectasias, and venous or arteriovenous malformations; These are mainly of congenital origin and develop simultaneously with the rest of the body tissues.[3]

Classically, vascular hamartomas are asymptomatic even when the etiology is congenital, and can remain silent until different stages of adolescence or adulthood.[3] However, they usually present as painless masses that gradually increase in size and can sometimes be associated with minor symptoms depending on its location and size.[4,10] In our case, the only clinical symptom present was pain on compression at the lesion site.

Ultrasonography plays an important role in the evaluation of vascular malformations by providing valuable information that helps in the diagnosis and in the evaluation of the extent of the lesion.[8] Physicians are the main proponents of the use of ultrasound, this due to its relatively low cost and wide availability. However, the definitive diagnosis is evidenced through histopathology.[2,3]

Management of vascular hamartomas should be individualized based on location, extent of lesion, flow characteristics, accessibility, and cosmetic considerations. There are various therapeutic tactics, both conservative and surgical; Within the first variety of treatments, we find the administration of systemic steroids, arterial embolization with thrombin foam gel compresses, focused laser therapy, and as part of the second group is complete surgical resection, being the treatment of choice for lesions well-defined symptomatic.[2,6] However, hamartomas require as extensive a surgical resection as possible to reduce recurrence.[9]

CONCLUSION

Vascular hamartomas are a benign pathology rarely reported, due to their low incidence. This can make timely diagnosis difficult, as well as the ideal treatment for these patients. Within the available information we observe that the age group in which our patient is found coincides with the published prevalence, allowing us to suspect this type of pathology in future cases and at the same time to emphasize the need to carry out new research protocols that allow provide surgeons with the necessary tools to provide adequate medical care.

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REFERENCES

1. Tjarks BJ, Gardner JM, Riddle ND. Hamartomas of skin and soft tissue. Semin Diagn Pathol. 2019;36(1):48-61.
2. Edgerton MT. Vascular hamartomas and hemangiomas: classification and treatment. South Med J. 1982;75(12):1541-7.
3. Al Laham O, Shaheen J, Abdul Aziz J, Abou Azan A, Jomaa Al Ali I, Alhanwt A. Felicitous surgical management of a ponderously rare diagnosis of a Vascular Hamartoma in the neck of an adolescent female - A Case Report. Int J Surg Case Rep. 2022;96:107359.
4. Ferri V, Ielpo B, Duran H, Diaz E, Fabra I, Plaza C, et al. Clinical Presentation and Anatopathologic Finding of a Hepatic Vascular Hamartoma: a Case Report. Ann Hepatol. 2019;18(1):225-9.
5. Requena L, Sangueza OP. Cutaneous vascular anomalies. Part I. Hamartomas, malformations, and dilation of preexisting vessels. J Am Acad Dermatol. 1997;37(4):523-49.
6. Jayaraman V, Austin RD, Kannan S. Nonsurgical management of vascular malformation of masseter. Indian J Dent Res. 2015;26:96-100.
7. Fonseca X, Cubillos AF, González OC. Vascular hamartoma of the lower turbinate Report on two cases. Rev Otorrinolaringol Cir Cabeza Cuello. 2005;65:135-8.
8. Johnson CM, Navarro OM. Clinical and sonographic features of pediatric soft-tissue vascular anomalies part 2: vascular malformations. Pediatr Radiol. 2017;47:1196-9.
9. Lu H, Chen Q, Shen H. Hamartoma compress medial and radial nerve in neurofibromatosis type 1. Int J Clin Exp Med. 2015;8(9):15313-6.
10. Senger JL, Classen D, Bruce G, Kanthan R. Fibrolipomatous hamartoma of the median nerve: A cause of acute bilateral carpal tunnel syndrome in a three-year-old child: A case report and comprehensive literature review. Plast Surg (Oakv). 2014;22(3):201-6.

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