Cirsoid aneurysm of the scalp: case report

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ABSTRACT

We report a case of a 23-year-old man presented with a painful swelling over his right occipital region. Selective right carotid angiogram demonstrated a markedly tortuous and dilated right occipital artery feeding into a circular or cirsoid aneurysm in the right occipital scalp. Percutaneous occlusion of the cirsoid aneurysm was not attempted and the patient underwent a successful resection of the fistula with good outcome after three months followed up.

KEYWORDS

Cirsoid aneurism, scalp arteriovenous fistulas.

Introduction

Cirsoid aneurysms are rare arteriovenous fistulas of the scalp. They are usually congenital in etiology. However, traumatic fistulas have also been described.²⁻⁴ The term “cirsoid aneurysm” is used because this lesion resembles a varix; the derivation of cirsoid is from the Greek word kírsos, or varix.¹⁻³ The superficial temporal artery is the most commonly involved artery.¹⁻⁴ Patients usually present with a pulsatile disfiguring scalp mass which can be extensive and grotesque. Other presenting symptoms include headache, pulsatile tinnitus, and hemorrhage from the lesion following minor head trauma.¹⁻³ Treatment options include surgical resection, endovascular occlusion, and direct percutaneous injection of sclerosing agents.⁵ The radiological findings are important for patient management.¹⁻⁵

Case

A 23-year-old man presented with a painful swelling over his right occipital region. On examination, a pulsatile occipital scalp mass was detected, with large visible draining veins. There was a small area of skin ulceration over the mass but no active bleeding. On auscultation, a bruit was detected over the lesion. The neurological examination was normal. The patient underwent selective four-vessel angiography. Selective right carotid angiogram demonstrated a markedly tortuous and dilated right occipital artery feeding into a circular or cirsoid aneurysm in the right occipital scalp (Figure 1). Large draining veins were noted running anteriorly toward the vertex and posteriorly toward the occiput. There was evidence of drainage into the sagittal and transverse sinuses and superior cortical veins via

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the calvarial emissary veins (Figure 1). Because of the intracranial venous drainage, percutaneous occlusion of the cirsoid aneurysm was not attempted and the patient underwent a successful resection of the fistula. He made a complete recovery with no recurrence of the fistula at the three-month follow-up examination. Patient consented with this report.

Discussion

Cirsoid aneurysms of the scalp occur infrequently and can be difficult to remove. Since the early 1800’s, numerous reports of cirsoid aneurysms have appeared in the literature.\(^1\)\(^,\)\(^2\)\(^,\)\(^3\) Initial attempts at ligation of feeding arteries proved ineffective. Ligation of feeding vessels followed by resection of the lesion has occasionally met with success. Other reported treatments include radiation therapy, electrothrombosis, scalp tourniquet,\(^2\)\(^,\)\(^4\) scalp compression with pads and springs\(^4\) direct injection with alcohol, and embolization.\(^1\)\(^,\)\(^2\)\(^,\)\(^5\)

Untreated patients can develop progressive scalp and facial cosmetic deformity from the markedly tortuous subcutaneous vessels. However, this condition is not life-threatening.\(^1\)\(^,\)\(^2\) Surgical resection of the fistula is usually successful, as was for this patient.\(^1\) Multiple treatment schemes have been described and, as yet, no standard form of therapy exists. Direct surgical excision risks severe intraoperative blood loss.\(^1\)\(^,\)\(^2\)

Endovascular and percutaneous occlusion of the fistulas have been described. The results of endovascular occlusion are dependent on the angioarchitecture of the fistula, the supplying arteries and draining venous structures. Arterial approaches may not often be successful in occluding the entire fistula due to the problem of multiple feeding arteries being recruited to supply the fistula. Occlusion of the venous pouch usually requires later surgical removal of the embolic material.\(^3\)\(^,\)\(^5\)

References


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