SHORT REPORT

Aneurysm of the Subclavian Vein

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Congenital venous aneurysms are exceedingly rare. We present a case report of a 13-year old girl with a 10 cm large cosmetically disturbing aneurysm of the left subclavian vein. The aneurysm was successfully resected. This patient and the literature is discussed.

Keywords: Congenital; Aneurysm; Vein.

Introduction

Congenital venous aneurysms are described in the literature only in case reports or in small series. Only one case of a subclavian vein aneurysm has been reported in the English literature. This paper reports the history and treatment of a 13-year old girl with a large aneurysm of the left subclavian vein. The aneurysm had neck with a diameter of 15 mm. The neck was clamped tangential to the subclavian vein and the aneurysm was subsequently resected. The subclavian vein itself was not clamped.

Case Report

History

A 13-year old girl was referred to our centre because of a swelling in the left supraclavicular region of the neck. The swelling had been present at birth and had grown in size. The girl found the swelling disturbing from a cosmetic point of view. She was otherwise healthy, normally developed for her age, and not on any permanent medication.

Examination

With the patient in an upright position, a distinct swelling of the left jugulum was seen (Fig. 1(a)). The swelling increased in size during expiration and during the Vasalva manoeuvre (Fig. 1(b)). On palpation, the mass was compressible and not tender. Duplex-ultrasound and CT angiography revealed an aneurysm of the subclavian vein with a maximum diameter of 10 cm (Fig. 2).

Surgical technique and follow-up

A horizontal incision was made in the left supraclavicular fossa. The neck of the aneurysm, which had a diameter of 15 mm, was clamped tangential to the subclavian vein and then resected. The subclavian vein itself was not clamped at any time. The dissection of the aneurysm from the surrounding tissue was complicated by its proximity to the skin as well as the thinness of the aneurysm wall. However, the operation was successful and performed with a minimum of blood loss (Fig. 3). The postoperative period was uneventful and the patient was discharged 2 days after surgery. At follow-up with ultrasound 6 months later, the left subclavian vein was normal and the patient was at good health and satisfied with the operation.
Discussion

Only one case of a true subclavian vein aneurysm has been described.1

Venous aneurysms are most commonly found in the lower, anterior regions of the neck with the anterior jugular vein as the most frequent site of origin.2 These aneurysms may be associated with other vascular anomalies, e.g. Klippel–Trenaunay, and should be suspected if a venous aneurysm is accompanied by varicosities.3

The aetiology of venous aneurysms is largely unknown.4 Focal defects in the development of the tunica media have been suggested as a possible explanation of the condition.5 On pathological examination of aneurysm specimens the tunica media has been found to be sparse or absent.5 However, the presence of all three layers of the vascular wall has been reported.2 A histopathological analysis of the resected aneurysm was not done in our case.

The indications for treatment of venous aneurysms are thrombosis, growth and cosmetic disturbances.2 Venous aneurysms of the abdomen and lower extremities are associated with thrombosis and may be complicated with pulmonary embolism which is why a prophylactic operation is indicated.3 The natural history of venous aneurysms of the neck region is reported to be benign. This is why the indication for operation is mainly for cosmetic reasons, as was the case in our patient.2–4

Preoperative assessment of venous aneurysms is preferably performed with duplex ultrasound and CT angiography or magnetic resonance imaging. Alternatively, phlebography may be done. However, since the natural history of congenital venous aneurysms of the neck region is uncomplicated, those aneurysms should be observed unless they interfere with the lifestyle of the child. Otherwise, invasive diagnostic procedures should be reserved only for those cases where the malformation interferes with breathing or eating. Aneurysms of the subclavian vein probably cause cosmetic disturbances only. Surgical excision is the appropriate treatment if the condition is cosmetically unacceptable for the patient.

**Fig. 1.** (a) Aneurysm of the left subclavian vein, inspiration phase. (b) The aneurysm during Valsalva maneuver.

**Fig. 2.** CT-scan of the aneurysm. The arrow points at the aneurysm.

**Fig. 3.** The planned incision was marked.
References


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