

CASE REPORT

External jugular vein spontaneous aneurysm: a case report

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Abstract

Venous aneurysm of external jugular vein is very rare clinical entity. Often asymptomatic, the diagnosis may be suggested by clinical features and is usually confirmed by imaging. Surgical excision is indicated in symptomatic aneurysms and for esthetic reasons, other treatments such as endovascular treatment are being evaluated. We report a case of a 27-year-old woman with a saccular aneurysm of the right external jugular vein diagnosed by computerized tomogram angiography. The patient received successful surgical treatment.

INTRODUCTION

Venous aneurysms of the neck are rare clinical entities. Venous aneurysm of the neck commonly involves the internal jugular vein [1]. Venous aneurysm of external jugular vein is very rare and very few cases have been reported in the English literature [2]. The rarity of this entity is due to the low pressure in these vessels, which characterizes the superior vena cava system. They can be congenital or acquired.

The diagnosis may be suggested by clinical features and is usually confirmed by imaging, venous aneurysms in the neck usually have a benign clinical course and may present as cervical swelling, pain and tenderness in the neck. We report a case of a 27-year-old woman with a saccular aneurysm of the right external jugular vein diagnosed by computerized tomogram (CT) angiography; pertinent literature and relevant diagnostic and therapeutic modalities are reviewed.

CASE PRESENTATION

A 27-year-old woman presented at our outpatient department with complaints of progressive swelling on right supraclavicular region, which had been enlarging progressively over a period of a few months.

The swelling was not associated with pain or difficulty with breathing or swallowing. He had no history of trauma to the neck, venous catheterization or any surgical procedure.

On examination, the swelling was not visible; however, it appeared when performing the Valsalva maneuver. It



Figure 1. A 27-year-old woman presented with a lump at the right supraclavicular region.

was soft, cystic, nontender and compressible on palpation (Fig. 1). The skin overlying the mass had no signs of inflammation, no bruit could be detected on auscultation over the swelling. There was no other swelling in the neck or on other parts of the body. Chest X-ray was normal.

A CT angiography revealed a 1.6 × 2.1 cm sized venous aneurysm with intraluminal thrombus (Fig. 2) to prevent a possible pulmonary embolism, surgical excision is indicated.

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Figure 2. Axial and coronal multidetector CT images following intravenous contrast administration showing the saccular aneurysm arising from the external jugular vein.



Figure 3. A macroscopic view of the removed right external jugular vein.

After ligating the external jugular vein proximally and distally, excision of the venous aneurysm was carried out (Fig. 3). After an uneventful postoperative course, the patient was discharged on the third postoperative day.

DISCUSSION

True venous aneurysms are rarely encountered compared to arterial aneurysm, as well as can affect any veins including intracranial, cervical, thoracic, visceral, and upper and lower extremity veins; however, venous aneurysms of the neck are rare due to low pressure in the vena cava system [3]. Venous dilatation in the neck involves the internal, external and anterior jugular vein, in descending order of frequency [4]. Aneurysm of the external jugular vein is rare and very few cases have been reported in the literature to date. It can be congenital, usually presenting by childhood with most commonly a fusiform configuration on the right side. A jugular venous saccular aneurysm can occur spontaneously too, and it also can occur rarely because of inflammation, trauma and secondary to tumors [5] In the present case, this was a saccular aneurysm which appear spontaneously.

Clinically, by a careful physical examination, the definite diagnosis can often be accurately established.

The clinical presentation of an external jugular vein aneurysm is usually a painless cervical swelling that may gradually increase in size. In the presence of a unilateral, non-tender and non-pulsatile swelling that enlarges with straining, sneezing or valsalva maneuver, one should be suspicious of a venous aneurysm [6]. Differential diagnosis for such lesion includes lymph node, laryngocele, thyroid lesion, lipoma, thyroglossal cysts, branchial cyst, cavernous hemangioma, pharyngeal pouch and arterial aneurysm. The radiological investigations for diagnosis range from simple ultrasonogram to more sophisticated tools such as venography, CT angiography and magnetic resonance angiography, CT angiography with digital subtraction angiography used to be the gold standard in the diagnosis of venous aneurysm of the neck [7].

The most important complications of venous aneurysms include thrombosis, thrombophlebitis, pulmonary thromboembolism and rupture [8–10]. Ioannou et al. reported a case of an external jugular vein aneurysm with thrombosis causing undetected pulmonary embolisms [10].

Surgical excision is the treatment of choice in the management of venous aneurysm of the neck for the fear of risk of thrombosis, possible fear of rupture, and for cosmetic and esthetical reasons [11].

Endovascular treatment or embolization serves as a minimally invasive option with potentially similar outcomes and cosmetic benefits as surgery [12].

CONCLUSION

Venous aneurysm of external jugular vein is very rare clinical entity, and can present spontaneously in adult patients. Doppler ultrasound and CT angiography are the gold standard for the diagnosis. Treatment is reserved for cosmetic reasons or when complications arise.

DATA AVAILABILITY

All data generated or analyzed during this study are included in this published article.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing interests.

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