

A Giant Primary Aneurysm of the Greater Saphenous Vein in an Adult Patient

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Abstract: Primary venous aneurysm of the proximal saphenous vein are uncommon; generally observed in deep venous system of the lower extremity. These unusual vascular malformations occur equally between the sexes and can be seen at any age. The case presented here was a rare case of a giant primary aneurysm of the greater saphenous vein in an adult.

Key words: Venous aneurysm, greater saphenous vein, venous disease, giant mass, vascular mass

INTRODUCTION

Primary venous aneurysm is an uncommon entity; generally observed in deep venous system of the lower extremity. These unusual vascular malformations occur equally between the sexes and can be seen at any age^[1]. Primary great saphenous vein aneurysms (PGSVA) are not frequent and only few pediatric cases have been reported^[2,3]. Here we present a giant primary aneurysm of the greater saphenous vein in an adult patient.

CASE

A 40 year old female patient admitted to our clinic with complaints of pain at right leg and a mass at right groin existing for a year. Her medical history was free of any trauma, systemic diseases or thromboembolic problems. At her initial physical examination, there was a mass with 5x10 cm dimensions and regular borders located approximately 10 cm below the right inguinal region. The other physical findings were normal.

Duplex ultrasound demonstrated a huge saccular aneurysm (6 cm in diameter) of the saphenous vein with varicose dilatations distally. Deep venous system was visualized as normal with duplex ultrasonography. No other venous anomalies were identified. We offered surgical repair due to apparent symptoms, cosmetic appearance and the potential risk for thromboembolic complications.

At the operation, an aneurysm was exposed. Her venous aneurysm was found below the inguinal region [Fig. 1]. We excised the aneurysmatic vein and varicose distal saphenous vein. The aneurysm was 6 cm in diameter and it was totally filled with thrombosis [Fig. 2]. The postoperative course was uneventful, edema



Fig. 1: A huge primary greater saphenous vein aneurysm exposed at surgery

of the limb was not observed following surgery. Pathologic examination showed a single lumen vein lined by thinned smooth muscle, fibrous tissue and fragmented elastin.

She was discharged at the second postoperative day. The physical examination findings were normal when she has been doing well at the 2nd month of operation.

CONCLUSIONS

Venous aneurysm is a rare vascular abnormality that can occur throughout the venous system. Gillespie *et al.*, presented a retrospective review of 39 venous aneurysms in 30 patients. Of these, 77 % were located in the lower extremities, 10 % were in the upper extremities and 13 % involved the internal jugular vein. Fifty-seven percent of lower extremity aneurysms occurred in the deep venous system^[1]. Few case reports exist in the literature



Fig. 2: Venous aneurysm was totally filled with thrombosis

for PGSVAs and these are pediatric cases^[2,3]. Our patient was 40 years old and she had a huge primary aneurysm of the greater saphenous vein.

The etiology of primary venous aneurysm is unclear. They may be secondary to congenital vein wall weakness, degenerative or inflammatory changes and perhaps to chronic local trauma from adjacent arteries and external trauma^[2,4]. The external trauma is most often found in adults^[2]. Our patient had no history of trauma, chronic inflammatory disease and vascular disease.

Location site is the most important fact on the presentation of pure venous aneurysms. Superficial venous aneurysms are usually symptom-free being found as a subcutaneous mass, an incidental finding on an imaging study. Superficial venous aneurysms are often misdiagnosed as soft tissue masses or as inguinal or femoral hernias^[1,3].

Deep venous thrombosis and pulmonary embolism are commonly seen in the venous aneurysms of the deep venous system rather than the superficial one^[1]. Our case admitted to our clinic with a complaint of a painful mass at her right groin. Her venous aneurysm was totally filled with thrombosis Fig. 2, however there was no emboli.

Small, asymptomatic, fusiform PGSVAs may be followed up with duplex scanning. Saccular aneurysms of any size, large fusiform aneurysms should be treated surgically, because of the potential for future thromboembolic events. Symptomatic cases should be treated surgically since the reported surgical results were excellent^[4].

It is particularly important for patients with venous malformations to have an accurate assessment of their deep venous system. Surgical resection of superficial

venous system might be the choice of treatment in a patient if the deep venous system is normal. If the remaining venous collateral system is not adequate to drain the limb, massive lower extremity swelling and ulceration may develop^[5]. Since our patient had normal deep venous system with duplex ultrasonography, we preferred to excise the aneurysmatic vein and varicose distal saphenous vein.

A PGSVa can be successfully repaired using a polytetrafluoroethylene interposition graft^[6] and it can be treated with ligation and/or excision. Preservation of the saphenous vein should be considered in patients who have a normal distal saphenous vein. Repair of a primary saphenous venous aneurysm preserves the saphenous vein for use as a conduit for later coronary bypass surgery^[7].

This report describes a very rare case of PGSVa in an adult. To our knowledge this is the greatest primary aneurysm of the greater saphenous vein successfully treated with surgical resection. The reported risks of thromboembolic events and rupture of aneurysms of great saphenous veins, make surgical treatment mandatory even in asymptomatic cases.

REFERENCES

1. Gillespie, D.L., J.L. Villavicencio, C. Gallagher, A. Chang, J.K. Hamelink, L.A. Fiala and *et al.*, 1997. Presentation and management of venous aneurysms. *J. Vasc. Surg.*, 26: 845-52.
2. Yasumoto, M., H. Shibuya, Y. Goto, T. Saitoh, K. Nakajima and S. Suzuki, 1987. Primary saphenous venous aneurysms presenting in a child. *Clin Nucl. Med.*, 12: 29-30.
3. Majeski, J., 2002. Surgical repair of primary saphenous vein aneurysm of the proximal leg after initial presentation as an inguinal hernia. *Am. Surg.*, 68: 999-1002.
4. Andrew, L., 2004. Tambyraja MRCSEd^a, Carl Moores FRCA^a and Roderick TA, Chalmers MD, FRCSEd^a, Primary popliteal venous aneurysm. *J. Vasc. Surg.*, pp: 40-830.
5. Glociczki, P. and J.S.T. Yao, 2001. *Handbook of Venous Disorders*. 2nd Ed, pp: 439-451.