Aneurysm of the accessory saphenous vein: A rare case

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Abstract

Venous aneurysms are rare entities observed in neck, thorax, extremity, and abdominal veins. Although the exact etiology is unknown, trauma to vessel wall, inflammation, congenital anomalies, and local degenerative changes are implicated. Venous aneurysms may be thrombosed and lead to thromboembolic events, acute pulmonary embolism, and death. Resection of the aneurysm is the general preferred approach. We present a 56-year-old male with swelling in left inguinal region and symptoms of chronic venous insufficiency. Diagnostic workup revealed an aneurysm in left accessory saphenous vein. It was resected under local anesthesia. The patient was discharged without any complications.

Introduction

Lower extremity venous aneurysms are rare and classified as superficial and deep venous aneurysms of the venous system. While the etiology is still debated, trauma to vessel wall, inflammation, congenital anomalies, and local degenerative changes lead to aneurysm formation. Deep venous aneurysms more commonly cause thromboembolism whereas superficial venous system aneurysms frequently lead to chronic venous insufficiency and venous reflux (1,2). The diameter of venous aneurysms may be altered by the pressure exerted on the proximal vein, postural changes and valsalva maneuver. The most common localization for deep venous system aneurysms is the popliteal region, and those are usually diagnosed during assessment of chronic venous insufficiency or thromboembolic disease (3).

This paper presents a patient operated in our clinic for left accessory saphenous vein aneurysm which is very rare.

Case Report

A 56-year-old male presented to our clinic with the complaints of edema, pain, varicosity at left lower extremity and swelling in the left inguinal region. He had a prior diagnosis of chronic venous insufficiency. The swelling in left inguinal region was soft on palpation and was responsive to compression. Left lower extremity venography revealed aneurysmal dilatation of almost 31 mm at the origin of the side branch of great saphenous vein. He gave no history of trauma or thromboembolic complication.

In exploration performed under local anesthesia, a venous aneurysm of approximately 5X1.5 cm in the accessory saphenous vein was spotted prior to drainage point to the great saphenous vein (Figure 1a). Following 1 cc heparin injection, the aneurysm was resected by ligation of proximal and distal parts (Figure 1b). The patient was discharged on postoperative day 3 without complications.

Discussion

The general definition of aneurysm is the dilatation at the vessel wall at least 1.5 times of the normal segment. Although it seems to be a reasonable definition, it may be erroneous when the non-aneurysmal venous segment is abnormal, dilated or long (4,5). Despite an unclear etiology, trauma to the vessel wall, inflammation, congenital anomalies and local degenerative changes lead to aneurysm development (1,2). A literature search revealed only one case with an aneurysm of the accessory saphenous vein, our case being the second, thereby
increasing the importance of our case report.

Gillespie et al. reported their 22-year experience and stated that aneurysms belonging to deep venous system had a ratio of 44% while superficial venous aneurysms had 37% (5). Transformation of chronic venous insufficiency-induced end-stage varicose veins to superficial venous aneurysms seems logical (2). Histology of venous aneurysms and varicose veins are similar. Both have aneurysm thin intima layer and a smooth muscle layer interrupted from place to place (6). Another study revealed that the local structural changes and matrix metalloproteinases at the vessel wall are greater in venous aneurysms compared to normal and varicose saphenous veins (7). Patients with superficial venous aneurysm usually present with pain, edema and a mass in the extremity. Our case also presented with similar complaints. On the other hand, albeit rare, patients may also present with varicose veins. Gillespie et al. reported that 3 patients out of 13 patients with superficial venous aneurysm developed aneurysm due to primary varicose veins (5). Superficial venous aneurysm usually presents with thromboembolism and pulmonary embolism. Although the incidence of superficial aneurysm-associated pulmonary embolism is unknown, Gillespie reported pulmonary embolism in 1 of 13 patients while Sessa et al. reported pulmonary embolism in 6 of 25 patients with popliteal venous aneurysm (5,6). Doppler ultrasonography remains the first choice in imaging although CT and MRI may also be used. Small asymptomatic fusiform aneurysms may be followed with Doppler ultrasonography. Doppler ultrasonography can delineate the size of the aneurysm and show a thrombus inside the lumen while color Doppler can differentiate it from non-vascular lesions. Phlebography is the most sensitive and specific diagnostic method (4). The indications for treatment in superficial venous aneurysms of the lower extremity are pain, edema and varicosity due to reflux as well as prevention of venous thromboembolism (5).

Open surgery remains the first treatment option while non-invasive ablation technique has low therapeutic applicability due to large aneurysmal diameter (2,4). Ligation and excision are the main surgical approaches in open surgery. We also performed ligation and excision of the aneurysmal segment.

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Conflicts of Interest
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Figure 1. a) Intraoperative appearance of the aneurysm  
b) The intraoperative post-ligation appearance of the aneurysmatic venous segment of the accessory saphenous vein prior to drainage to the great saphenous vein
References