Case Report

Thrombosed Aneurysm of Superficial Epigastric Vein Simulating Inguinal Hernia: Report of Two Cases

Eleni Skandalou, Panagiotis Papadopoulos, Marianthi Kavelidou, Stavros Kalfadis, Theodoros Tzigkalidis, and Ioannis Skandalos

1. Introduction

Venous aneurysms are usually uncommon. Venous aneurysms were first identified in autopsy studies by Osler in 1915 (1). Venous aneurysms can be caused by trauma, inflammation, connective tissue abnormalities, and degenerative changes (2). Superficial venous aneurysms in the inguinal region may be misdiagnosed soft tissue masses or inguinal or femoral hernias (3, 4). Herein, we describe two cases of a thrombosed aneurysm of the superficial epigastric vein simulating an inguinal hernia. To our knowledge, only one other case of inferior epigastric vein aneurysm is reported in the literature. The superfi-
ci al epigastric vein was ligated, and the venous aneurysms (6×4×3 and 2×3×2.5 cm, respectively) were excised. Histological examination of the thrombosed aneurysm showed complete replacement of the vascular wall by fibrous tissue, thrombosis, and an inflammatory reaction. There were no postoperative complications, and both patients were discharged on the second postoperative day. The 3-month and 1-year follow-up examination, respectively, was uneventful.

2. Case Presentation

First case: a 34-year-old female patient was admitted for an extensive painful swelling along her left inguinal area during the past 6 months. She was a nonsmoker, there was no trauma, use of oral contraceptive pills, infection, inflammatory disease, and recent travel in her medical history while review of systems was unremarkable. The patient had a medical history of left saphenectomy 8 years ago. Venous aneurysms were first identified in autopsy studies by Osler in 1915 (1). Venous aneurysms can be caused by trauma, inflammation, connective tissue abnormalities, and degenerative changes (2). Superficial venous aneurysms in the inguinal region may be misdiagnosed soft tissue masses or inguinal or femoral hernias (3, 4). Herein, we describe two cases of a thrombosed aneurysm of the superficial epigastric vein simulating an inguinal hernia. To our knowl-
edge, only one other case of inferior epigastric vein aneurysm is reported in the literature, and it is not clear if this is an aneurysm of the superficial or the deep inferior epigastric vein (5).
The patient was operated under spinal anesthesia, and a left oblique inguinal incision was performed. A large blue mass, due to a thrombosed fusiform aneurysm of the superficial epigastric vein, was found (Figure 1). The superficial epigastric vein was ligated flat to saphenous stump, and the venous aneurysm (6 × 4 × 3 cm) was excised (Figures 2 and 3).

The second case: a 28-year-old female patient was admitted for mild painful swelling along the left inguinal area over the past 2 months. There were no remarkable findings in the patient’s history of the predisposing factors, and the review of the systems was unremarkable. Physical examination revealed an inconsolable, immobile, and painful swelling along the left groin. The imaging examination with triplex ultrasonography (left inguinal hernia) (Figure 4) and computed tomography (inguinal lymph node enlargement) (Figure 5) was not diagnostic. The results of electrocardiography, biochemistry routine, and blood analysis were normal.

The differential diagnosis preoperatively was left inguinal hernia and inguinal lymph node enlargement. The patient was operated under spinal anesthesia, and a left oblique inguinal incision was performed. A large blue mass, due to a thrombosed saccular aneurysm of the superficial epigastric vein, was found (Figure 6). The superficial epigastric vein was ligated flat to saphenous stump, and the venous aneurysm (2 × 3 × 2.5 cm) was excised (Figure 7).

3. Results

Histological examination of the thrombosed aneurysm showed complete replacement of the vascular wall by fibrous tissue, thrombosis, and an inflammatory reaction (Figure 8). There were no postoperative complications, and both patients were discharged on the second postoperative day. The 3-month and 1-year follow-up examination, respectively, was uneventful.

4. Discussion

Venous aneurysms are rare vascular malformations that occur throughout the body and vessels at various sites can be affected as in the internal jugular vein, superior vena cava,
inferior vena cava, superior mesenteric vein, and also veins of the extremities (6, 7). Primary venous aneurysms are morphologically divided into two subgroups, saccular and fusiform (8). In literature, there are cases of venous aneurysms in all ages with equal distribution between both sexes (9). Primary venous aneurysms are usually congenital or develop from defective venous wall tissue (10). Secondary or acquired venous aneurysms are usually found in adults and are associated with trauma, inflammation, stretch injury, or altered venous hemodynamics. The previously reported case of superficial epigastric vein thrombosed aneurysm (5) and our two cases occurred in women of young age.

Histologically, there is replacement of three normal vascular wall layers by fibrous tissue with thrombosis and inflammatory infiltration (11). In both of our cases, the histological findings, due to aneurysm thrombosis, were complete replacement of the vascular wall by fibrous tissue, thrombosis, and an inflammatory reaction.

The causing symptoms are due to disfigurement, rupture, fistulation, or compression. Deep venous aneurysms present with pain or pulmonary embolism, while superficial venous aneurysms are usually asymptomatic; so, venous aneurysms located in the inguinal region, could be misdiagnosed as soft tissue lesions (6, 12) or as inguinal hernias (3, 4). Patients often complain of pain and a gradually

Figure 4: Triplex ultrasonography: ultrasound findings suggesting left inguinal hernia (arrow).

Figure 5: Computed tomography: in the inguinal region, a clearly demarcated formation diameter of 2 cm, with solid and cystic elements, is showed (swollen lymph node?) (arrow).
increasing swelling (12). Because of the confusing symptoms and the unknown clinical entity, our patients were clinically misdiagnosed as having an inguinal hernia instead of the correct diagnosis.

Venous aneurysms can generally be diagnosed mainly by color Doppler imaging (12), as well as by computed tomography (CT) or magnetic resonance imaging (MRI). Our second patient was misdiagnosed by imaging examination with triplex ultrasonography (left inguinal hernia) and computed tomography (inguinal lymph node enlargement), due to the rarity and not considering of the diagnosis of superficial epigastric vein aneurysm.

The anatomic position of the venous aneurysm defines the best surgical approach. The indication for surgical treatment of superficial, neck, and face venous aneurysms is usually cosmetic. Asymptomatic nonenlarging venous aneurysms can be safely followed up, due to their high surgical morbidity and mortality. Abdominal venous aneurysms are at high risk of becoming painful or bleeding, and thus surgery should be considered for low risk patients (7, 13). As deep venous aneurysms of the extremities are at high risk of thromboembolic complications despite anticoagulant therapy, surgery may be the optimal management in terms of tangential aneurysmectomy and lateral venorrhaphy (9). Endovascular techniques continue to lack a defined role in their management (6). A superficial epigastric venous aneurysm is a rare entity. It should be suspected in cases of an inguinal mass, and it can be safely resected, because it is a superficial vein.
5. Conclusion

We report two rare cases of a thrombosed venous aneurysm of the superficial epigastric vein, simulating an inguinal hernia. Although venous aneurysms in this region are rare, they should be included in the differential diagnosis of a groin swelling.

Ethical Approval

The Ethical Committee of the general hospital Agios Pavlos of Thessaloniki, Greece affirms that the manuscript “Thrombosed aneurysm of superficial epigastric vein simulating inguinal hernia. Report of two cases” by Eleni Skandalou, Panagiotis Papadopoulos, Marianthi Kavelidou, Stavros Kalfadis, Theodoros Tzikalidis, and Ioannis Skandalos follows the International Committee of Medical Journal Editors’ recommendations.

Consent

Written informed consent was obtained from the patients for publication of their personal data.

Conflicts of Interest

Authors have no conflict of interests.

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