An acute groin lump: surgical exploration is not always the best option

PT Davey, C Byrnes

Antrim Area Hospital, Antrim, UK

ABSTRACT

This is a case of a very unusual cause of an acute groin lump in a 71-year-old woman that was presumed initially to either be an incisional or inguinal hernia. However, with subsequent computed tomography it was shown to be thrombophlebitis of collateral vessels secondary to a previous deep vein thrombosis. This case demonstrates how surgical exploration of acute groin lumps is not without its dangers.

KEYWORDS

Acute groin lump – Thrombophlebitis – Collateral vessels post thrombosis – Hernia

Accepted 4 April 2011; published online 20 December 2011

CORRESPONDENCE TO

Phil Davey, 34 the Boulevard, Belfast BT7 3LN, UK
E: phildavey@doctors.net.uk

This is a case of a very unusual cause of an acute groin lump in a 71-year-old woman that was presumed initially to either be an incisional or inguinal hernia. However, with subsequent computed tomography (CT) it was shown to be thrombophlebitis of collateral vessels secondary to a previous deep vein thrombosis (DVT). This case demonstrates how surgical exploration of acute groin lumps is not without its dangers.

Case History

A 71-year-old woman presented through the accident and emergency department. She had a six-day history of suprapubic swelling associated with a burning pain. She had a similar episode eight months previously that resolved spontaneously.

Past medical history revealed that she had undergone an emergency laparotomy 20 years previously for perforated diverticular disease, and a stoma and mucous fistula were formed. She had developed a left femoral DVT at that time. Intestinal continuity was restored a year later. She had undergone a left total hip replacement.

Examination revealed pyrexia and a large tender erythematous mass in the left inguinal and suprapubic region (Fig 1). A cough thrill was evident. Due to body habitus it was difficult to localise where the mass originated.

Biochemical markers revealed an elevated C-reactive protein level of 99mg/l (normal range: 0–9mg/l) and a white cell count of $7.7 \times 10^9/l$ (normal range: $4\text{--}10 \times 10^9/l$). The differential diagnoses included an incarcerated inguinal or incisional hernia, a subcutaneous abscess or an inflamed lymph node.

CT was organised. This revealed no evidence of hernia or abscess. The scan demonstrated an absent left iliac vein (Fig 2). There were multiple large collateral vessels extending from the left saphenofemoral junction over the left inguinal region. These showed extensive inflammation in keeping with thrombophlebitis (Figs 3 and 4).

The patient was treated with ibuprofen, antibiotics and low-molecular-weight heparin. She continued to improve and was discharged home eight days later.

Figure 1 Inflamed erythematous left inguinal mass with midline laparotomy scar

Figure 2 Computed tomography showing the absence of left iliac vein compared to the right side

Figure 4 Coronal view showing the large collateral vessels arising from the saphenofemoral junction

Figure 3 Computed tomography showing large collateral venous vessels in the suprapubic region with associated extensive inflammation; again absence of the left external iliac vein is noted compared to the right side

Discussion

This patient appears to have developed a large collateral venous plexus from her left saphenofemoral junction in response to a post-thrombotic occlusion of her left iliac vein.

Following DVT, recanalisation will occur in over 50% of limbs within 90 days.¹ Failure of the fibrinolytic system to complete recanalisation will result in venous outflow obstruction. Pubic collateral veins are a clinical sign of iliac vein occlusion, generally secondary to DVT. They develop via enlarged external pudendal, superficial epigastric and

superficial circumflex iliac veins.² Collaterals can develop up to four years after DVT, which may improve symptoms in a post-thrombotic limb.⁵

In this case thrombophlebitis of these aberrant vessels presented acutely as an acute groin lump. If surgical exploration of the groin lump had been undertaken, there would have been significant risk of bleeding from the plexus of vessels. By ligating vessels in the area, the surgeon could have compromised the venous drainage of the left leg, possibly precipitating an acute or chronic venous insufficiency.

Two techniques for venous bypass surgery have been described in post-thrombotic limbs: a femoral–femoral crossover graft (Palma operation) using the contralateral long saphenous vein as the graft⁴ and a saphenopopliteal bypass for occluded deep thigh veins.

Conclusions

This is an unusual cause for an acute groin lump. Thorough clinical evaluation and appropriate imaging is recommended in unusual presentations to avoid unnecessary operations and/or potential complications.

References

1. Killewich LA, Bedford GR, Beach KW, Strandness DE Jr. Spontaneous lysis of deep venous thrombi: rate and outcome. *J Vasc Surg* 1989; **9**: 89–97.
2. Thomas ML, Fletcher EW, Cockett FB, Negus D. Venous collaterals in external and common iliac vein obstruction. *Clin Radiol* 1967; **18**: 403–411.
3. Darke SG. Venous Reconstruction. In: Bell PR, Jamieson CW, Ruckley CV, eds. *Surgical Management of Vascular Disease*. London: WB Saunders; 1992. pp1,221–1,238.
4. Palma EC, Esperonn R. Vein transplants and grafts in the surgical treatment of the postphlebotic syndrome. *J Cardiovasc Surg (Torino)* 1960; **1**: 94–107.