The Role of Thrombectomy in the Management of Deep Vein Thrombosis

A. Wright *, J. Newman, L. Meecham, A. Atwal

Introduction: Surgical venous thrombectomy has recently gained increasing popularity in the literature for the management of a range of clinical presentations of extensive acute deep vein thrombosis including: young and active patients, during pregnancy, postpartum and in patients with traumatic or postoperative thrombosis.

Report: We report a case of unilateral iliofemoral deep vein thrombosis arising secondary to external compression of the left common iliac vein by large uterine fibroids, successfully managed with open venous thrombectomy.

Discussion: Where conventional anticoagulation or catheter directed regional thrombolysis may be contraindicated, surgical thrombectomy has provided an appropriate alternative with good results.

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INTRODUCTION

Surgical venous thrombectomy has recently gained increasing popularity in the literature for the management of a range of clinical presentations of extensive acute deep vein thrombosis (DVT), including young and active patients, during pregnancy, after parturition, and in patients with postoperative thrombosis. We report a case of unilateral iliofemoral DVT arising secondary to external compression of the left common iliac vein by large uterine fibroids successfully managed with open venous thrombectomy.

REPORT

A 37-year-old woman with menorrhagia and uterine fibroids presented with an acutely painful, swollen left lower limb. Ultrasound venography confirmed extensive thrombosis of the common iliac, external iliac, common femoral, superficial femoral, and popliteal veins. Intravenous heparin was commenced. A computed tomography (CT) scan revealed large uterine fibroids causing external compression of the left common iliac vein (Fig. 1). A combined procedure of total abdominal hysterectomy (TAH) and left salpingo-oophorectomy (SO) was planned with left femoral and iliac venous thrombectomy. Thrombolysis was contraindicated in view of the need for surgery to remove the source of compression.

TAH and left SO were performed through a midline incision. An inferior vena cava (IVC) filter was inserted using a percutaneous approach via the right common femoral vein. A left groin incision was made to control the deep veins and distal thrombectomy was carried out using compression with an Esmarch bandage. Thrombectomy of the iliac veins was performed using a Fogarty catheter; a large volume of thrombus was retrieved from the external iliac vein but the catheter would not feed into the IVC. An on-table venogram confirmed a patent external iliac vein, but the catheter had migrated into an iliolumbar vein. Manipulation of the catheter into the common iliac vein (CIV) proved impossible as the catheter repeatedly migrated into the large iliolumbar vein. Hence an open approach was used for CIV thrombectomy via the open abdomen. The patient was fully anticoagulated postoperatively and made a good recovery; at 10 days the IVC filter was removed. Duplex ultrasound venography at 3 months demonstrated patent iliac, femoral, and popliteal veins. Anticoagulation was discontinued at 6 months; the patient remains asymptomatic at 2-year follow up.

DISCUSSION

Conventional treatment of DVT is immediate anticoagulation with unfractionated or low-molecular-weight heparin, followed by 3—6 months of oral warfarin. Popular because it can be initiated in the outpatient setting with no procedural complications, anticoagulation alone has no significant fibrinolytic activity, and patients with severe iliofemoral DVT treated this way are at significant risk of developing post-thrombotic syndrome (PTS). Catheter-directed thrombolysis (CDT) has been shown to be successful in the treatment of iliofemoral DVT, with low risk of systemic bleeding. However lysis times can often be prolonged and thrombolysis is often contraindicated.

A growing body of evidence supports the more widespread use of thrombectomy plus optimal anticoagulation for iliofemoral DVT versus anticoagulation alone. Thrombectomy has been shown to prevent severe PTS in the long term, improve the patency of the iliofemoral venous system, lower venous pressures, reduce oedema, and preserve.
normal valve function. Improvements in operative technique and the increasing use of endovascular angioplasty and stents have substantially improved the outcomes, with minimal PTS in patients up to 8 years following surgery.5

This case provides supporting evidence for the use of venous thrombectomy for the management of acute iliofemoral DVT where CDT is contraindicated. In this case a CT scan revealed large uterine fibroids causing external compression of the left CIV; hence TAH was necessary to remove the source of compression alongside treatment for the DVT. As clinicians become increasingly experienced with the more contemporary approaches to venous thrombectomy, the application of this technique in managing iliofemoral DVT should expand beyond specific clinical scenarios as illustrated in this case.

CONFLICT OF INTEREST
None.

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REFERENCES