

## Compression of the Left Common Iliac Vein by the Right Common Iliac Artery at the End of Gestation

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### Abstract

Pain, swelling, and deep venous thrombosis are common symptoms of the compression of the left common iliac vein by the right common iliac artery. One 29-year-old patient of gestation of the firstborn was presented significant edema and acute lower limb pain, and echocardiogram exam revealed acute thrombus in the left common iliac vein. She was submitted to a vena cava filter implant.

**Keywords:** May-turner; Thrombus; Implant; Pregnancy

### Case Report

Patient of 29 years of age presented himself in the obstetric outpatient clinic of an emergency unit, with sudden and acute of pain and significant edema in lower limb. Patient with no previous history of thromboembolic phenomena at the 37<sup>th</sup> week of gestation of the firstborn, presenting 5-cm dilation. She was submitted to the emergency echocardiogram exam, which revealed acute thrombus in the left common iliac vein. In an emergency, she was submitted to a vena cava filter implant and referred for delivery on the same day.

The newborn did not present changes and was discharged within two days. After 1 week after delivery, the patient developed pain worsening and a significant increase in edema undergoing electromechanical venous thrombectomy using the Aspirex<sup>®</sup> type catheter and left common iliac vein stenosis. Implantation of the left common iliac vein stent was performed due to compression of the left common iliac vein by the right common iliac artery (Cockt's Syndrome or May-Turnner). No immediate complication occurred and patient's symptoms completely resolved (**Figure 1**).

### Discussion

It is notorious that the condition of gestation causes important hemodynamic changes, the thrombotic phenomena during pregnancy are the result of hypercoagulability, combined with compression of the inferior vena cava by the gravid uterus. These changes of thrombogenic character are physiological resources preparatory to the delivery, reducing the risks of bleeding.

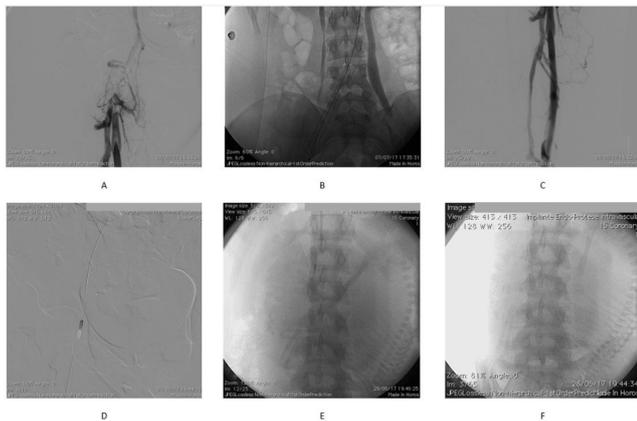
Data from the literature indicate that approximately eighty percent of the cases occur in the left leg due to abnormal compression of the left iliac vein by the right common iliac artery, a condition of the clinical case described in this article. And how were pointed out by Cagiatti in 2011 these occurs in a relevant number of asymptomatic individuals [3], being necessary a greater attention the complaints of edema and pain in lower limb, mainly in primigestas.

### Introduction

May and Thurner in 1957 clearly described venographic and hemodynamic findings to the compression of the left common iliac vein by the right common iliac artery [1], and is caused by both mechanical and physiologic factors. Although its incidence is still unclear, reports of iliac vein compression are common, and it is classically reported to be in young females and with symptoms of unilateral leg pain and edema. Clinical presentation and history of the patient are critical because the presence of iliac vein compression alone is insufficient for a diagnosis [2].

Diagnostic imaging inclui some modalities like ultrasonography, computed tomography, magnetic resonance venography, ascending contrast venography, hemodynamic studies, and intravascular ultrasound. The surgical management of MTS is correlated with a high morbidity rate and the use of endovascular techniques apresenta significativamente less risk and that can provide the best outcome. Endovascular treatment options include catheter-directed thrombolysis, angioplasty, and ultimately stent placement [2].

Studies have suggested that endovascular management with thrombolysis and stenting can result in better long term outcomes [4,5]. With the improvement in percutaneous endovascular techniques, balloon angioplasty and stenting have become the standard of care for cases like these. Concluding, in pregnant patients, even without history, the presence of acute pain and important edema in the lower limbs, may indicate a possible case of thurner syndrome.



**Figure 1:** (A) Phlebography being evidenced occlusion of external and common iliac vein (B) Image showing the vena cava filter and the stent in the common and external iliac vein. The filter was implanted on the day of diagnosis when it was 37 weeks' gestation. The implant was performed to prevent venous thromboembolism for presenting acute venous thrombosis of the common and external iliac vein. Performed implant of the vena cava filter and delivery 30 minutes after the implant. The stent was implanted on the day of venous thrombectomy because the patient presented compression of the left iliac vein by the right common iliac artery (C) Phlebography being evidenced femoral vein permeability with occlusion in the origin of the external iliac vein (D) Image showing an Aspirex thrombectomy catheter within the iliac vein promoting thrombus removal (E) Filter implanted in the inferior vena cava on the day of the diagnosis of thrombosis with the fetus, dilation of the uterine cervix (F) Fetus with 37 weeks at the moment of the implantation of the vena cava filter.

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