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Case Report

Vein Under Pressure: Cockett Syndrome Presenting with Extensive Iliofemoral Thrombosis

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Abstract

Cockett syndrome, also known as May-Thurner syndrome, is a rare vascular condition characterized by the compression of the left iliac vein by the overlying right iliac artery, leading to venous outflow obstruction and subsequent thrombosis. This case report describes a 30-year-old female who presented with acute left leg pain and swelling, subsequently diagnosed with thrombosis of the left iliofemoral vein due to Cockett syndrome. The report discusses the clinical presentation, diagnostic approach, and management strategies, emphasizing the importance of timely intervention to prevent complications.

Keywords: *Cockett Syndrome; May-Thurner Syndrome; Iliac Vein Thrombosis; Venous Compression; Endovascular Treatment*

Introduction

Cockett syndrome, or May-Thurner syndrome, is an uncommon condition caused by the anatomical compression of the left common iliac vein by the right common iliac artery against the lumbar spine. This compression can lead to chronic venous insufficiency and increase the risk of deep vein thrombosis (DVT) in the affected limb. Although this condition is relatively rare, it predominantly affects women in their second to fourth decades of life. Early recognition and management are crucial to prevent long-term complications such as post-thrombotic syndrome.

This article presents a case of a 30-year-old female who was diagnosed with thrombosis of the left iliac vein secondary to Cockett syndrome. We aim to highlight the clinical features, diagnostic process, and treatment options, underscoring the necessity of a multidisciplinary approach to managing this condition.

Case Report

A 30-year-old female with no significant medical history presented to the emergency department with acute left leg pain and swelling that had worsened over the past 48 hours. She reported no recent travel, immobilization, or trauma. Her family history was unremarkable for thrombotic disorders. On physical examination, her left leg was edematous and tender to palpation, with mild erythema extending from the thigh to the calf. The patient's vital signs were stable.

Laboratory tests, including a complete blood count and coagulation profile, were within normal limits, but a D-dimer test was elevated. Due to the clinical suspicion of deep vein thrombosis, a Doppler ultrasound of the lower extremities was performed, revealing thrombus formation in the left iliac vein.

To further evaluate the cause of thrombosis, a contrast-enhanced computed tomography (CT) scan of the abdomen and pelvis was conducted. The imaging confirmed the presence of compression of the left common iliac vein by the right common iliac artery, consistent with Cockett syndrome.

The patient was admitted for anticoagulation therapy with low-molecular-weight heparin, followed by the initiation of oral anticoagulants. Given the significant compression and risk of recurrent thrombosis, a vascular surgery consultation was obtained, and endovascular intervention was planned.

During the procedure, venography confirmed the extrinsic compression of the left iliac vein. A balloon angioplasty was performed, followed by the placement of a stent to relieve the obstruction and restore venous flow. Post-procedure, the patient experienced significant symptomatic improvement and was discharged with instructions for continued oral anticoagulation and follow-up with vascular medicine.

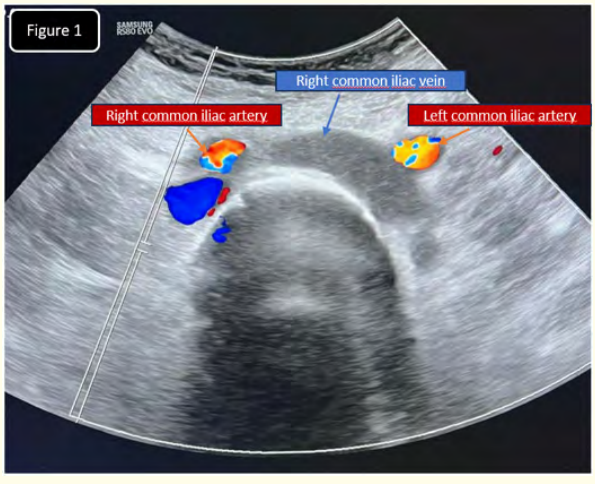

Figure 1: *Color Doppler ultrasound image the right common iliac artery is seen crossing over the left common iliac vein, which is not visualized here due to compression, consistent with May-Thurner (Cockett) syndrome.*

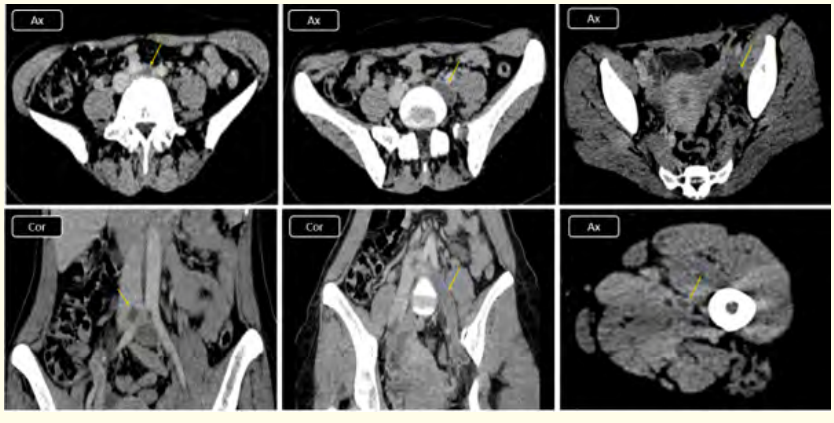

Figure 2

Discussion

Cockett syndrome should be considered in young patients, particularly females, who present with unexplained unilateral lower extremity swelling and pain. The condition is often underdiagnosed due to its rarity and nonspecific symptoms. Compression of the left iliac vein can lead to chronic venous stasis and predispose individuals to DVT [1].

Imaging studies, such as CT or magnetic resonance venography, are essential for diagnosis, as they allow visualization of the anatomical compression. Once diagnosed, treatment strategies aim to relieve the obstruction and prevent thrombotic events. Conservative management includes anticoagulation to address acute thrombosis, while more invasive procedures like angioplasty and stenting are often necessary for long-term resolution of venous compression [2].

This case underscores the importance of a high index of suspicion for Cockett syndrome in young women with left-sided DVT and the value of a multidisciplinary approach to treatment. Endovascular interventions offer a minimally invasive option with favorable outcomes [3], reducing the risk of post-thrombotic syndrome and improving quality of life [4].

Conclusion

Cockett syndrome is an important consideration in patients presenting with left iliac vein thrombosis, particularly in young women. Early diagnosis and intervention are crucial to prevent complications and achieve optimal patient outcomes. This case highlights the need for awareness among clinicians to recognize and manage this rare but significant condition effectively.

Conflicts of Interest

The authors declare no conflicts of interest.

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Ethical Approval

Not applicable.

Informed Consent

Written informed consent was obtained from the patient for the publication of this case report.

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