

## MAY-THURNER SYNDROME- A CASE REPORT

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**ABSTRACT**

We report a 52-year-old female who presented with complaints of pain and swelling of left lower limb for the past one week. Patient has been newly diagnosed with type 2 DM. She has no other known comorbidities. Evaluation revealed an echogenic thrombus extending from external iliac vein till popliteal vein. CT venogram of the left lower limb showed subacute deep vein thrombosis involving the left common iliac vein, external iliac vein, common femoral vein, superficial femoral vein, popliteal vein secondary to compression of the left common iliac vein by the right common iliac artery.

A diagnosis of May-Thurner syndrome was made on the basis of the above mentioned findings. Patient was initiated on iv anticoagulation and underwent catheter guided thrombolysis with streptokinase. Patient showed significant improvement of symptoms.

**KEYWORDS :****INTRODUCTION :**

May-Thurner syndrome is defined as extrinsic venous compression by the arterial system against bony structures in the ilio caval venous territory, most commonly of the left common iliac vein by the right common iliac artery.<sup>1</sup>

In 1851 Virchow observed that iliofemoral DVT was 5 times more likely to occur in left leg compared to right.<sup>2</sup> May and Thurner in 1957, noted intraluminal thickening which appeared to be directly and most commonly related to external compression of left common iliac vein by right common iliac artery.<sup>2</sup>

**Case report :**

A 52 year old multiparous women resident of Pondicherry presented to our hospital with complaints of swelling and pain over the left lower limb, which was sudden in onset, gradually progressive. She also had intermittent episodes of fever over the past one week. She had no history of prolonged immobilisation, no history of OCP intake. She had no complaints of breathlessness. Significant physical examination findings were tender erythematous swelling of the left leg from ankle to the thigh. Left calf measured 38 cm, whereas right calf measured 33 cm. Pulses were palpable in bilateral lower extremities. Her routine blood test were within normal limits. In view of high probability of DVT, USG doppler of left lower limb was taken, which was suggestive of proximal DVT. CT venogram revealed more than 50% compression of left iliac vein by the right iliac artery against the 5<sup>th</sup> lumbar vertebra. On the basis of history, radiological features, a diagnosis of May-Thurner syndrome was made. Patient underwent catheter guided thrombolysis with streptokinase. Post thrombolysis swelling and pain of the left lower limb reduced to a considerable extent.

**DISCUSSION :**

May-Thurner syndrome accounts for only 2-3% of the patients diagnosed with lower limb DVT.<sup>2</sup> Risk factors include female gender; particularly those who are postpartum, multiparous or using OCPs.<sup>3</sup> It is usually seen in the age group of 20 to 40 years.<sup>2</sup> Reported finding shows that lower extremity deep venous thrombosis occurs 3 to 8 times more frequently on the left side than the right. An iliac venogram obtained via a femoral artery is the diagnostic test of choice because it can demonstrate the compression itself and because the pressure gradient measurement can be performed to confirm the hemodynamic significance.<sup>1</sup> May-Thurner syndrome can cause significant deformities such as leg swelling, varicosities, chronic venous stasis ulcers or more serious complications such as pulmonary

embolism or phlegmasia cerulea dolens.<sup>1</sup> The goal for the treatment is to restore the normal flow in the compressed iliac vein. Treatment is usually reserved for those presenting with symptoms, most commonly DVT. Multiple surgical treatments have been advocated. These include vein-patch angioplasty with excision of the intraluminal bands, division of the right common iliac artery and relocation behind the left common iliac vein or inferior vena cava, and contralateral saphenous vein graft bypass to the ipsilateral common femoral vein with creation of a temporary arteriovenous fistula (Palma crossover).<sup>4</sup> Anticoagulation is usually continued for 6 months to a year post stenting but may continue for a longer period in patients in whom post thrombotic symptoms develop owing to venous stasis.<sup>5</sup>



Fig 1.1

Fig 1.2 Compression of left iliac vein by right common iliac artery at the level of 5<sup>th</sup> lumbar vertebra.

Fig 2.1



**Fig 2.2**

**CONCLUSION :**

May-Thurner syndrome should be kept in mind as a diagnosis in a young female presenting with left lower limb DVT. Although most cases are asymptomatic, MTS presenting with symptoms can cause significant morbidity. If diagnosis is missed then there is high risk of thrombosis, pulmonary embolism and post thrombotic syndrome. CT venography is the image modality of choice. Endovascular treatment with stent placement has shown to yield excellent result.

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