



## An Interesting Case of Iatrogenic May-thurner like syndrome

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### ABSTRACT

*Deep vein thrombosis secondary to compression of left common iliac vein by right common iliac artery known as "May-thurner syndrome" is a well known entity. However compression of vein by nearby other structures is also described. We hereby report Iatrogenic cause of May-thurner like syndrome caused by vertebral transpedicular screwing done for spondylolisthesis compressing on vein causing deep vein thrombosis which was successfully treated by catheter directed thrombolysis and decompression procedure.*

### CASE REPORT:

A 63 year old woman presented with complaints of swelling of left lower limb extending up to proximal thigh for 3 days. Patient had past history of orthopedic surgery done 3 years back. But as patient started experiencing recurrent low backache with neurogenic claudication, Patient was reevaluated by neurosurgeon and was found to have L4-5 sensory loss and grade 2 spondylolisthesis with screws and rods in situ, for which re exploration was done with removal of L 5 screw and placement of bone cement, and L4-5-S1 fixation with transpedicular screws and contour rods one month back. Post-surgery Patient was ambulatory and was able to perform ordinary physical activity.

On examination unilateral pedal edema on left side was present with features of proximal deep vein thrombosis of left lower limb. vitals were normal and cardiovascular system examination was normal. Investigations done showed normal biochemical parameters and ECG and Echocardiography were normal. Work up for hypercoagulable state done was negative.

Patient was evaluated by venous Doppler ultrasonography which revealed left lower limb deep vein thrombosis extending upto external iliac vein. Though clinical features were mimicking like May thurner syndrome, We initially presumed possible cause for DVT could be relative immobilization of limb in view of backache r. Planning for catheter directed thrombolysis, initially Venogram was done which showed thrombus filling up to left common iliac vein and interestingly transpedicular screws were seen compressing left common iliac vein and it was confirmed by CT scan later. Patient was treated with catheter directed thrombolysis which showed good response establishing forward flow and then patient was referred to neurosurgeon for decompression procedure. Post-surgery patient was started on oral anticoagulation therapy and advised to maintain target INR of 2-3. Patient improved well and is presently on optimal medical management. This case highlights the importance of past treatment history which bears significant impact on present diagnosis. This case was mimicking like may thurner but of different compressive etiology.



Figure 1: Venogram done from left popliteal vein shows filling defect suggestive of deep vein thrombosis

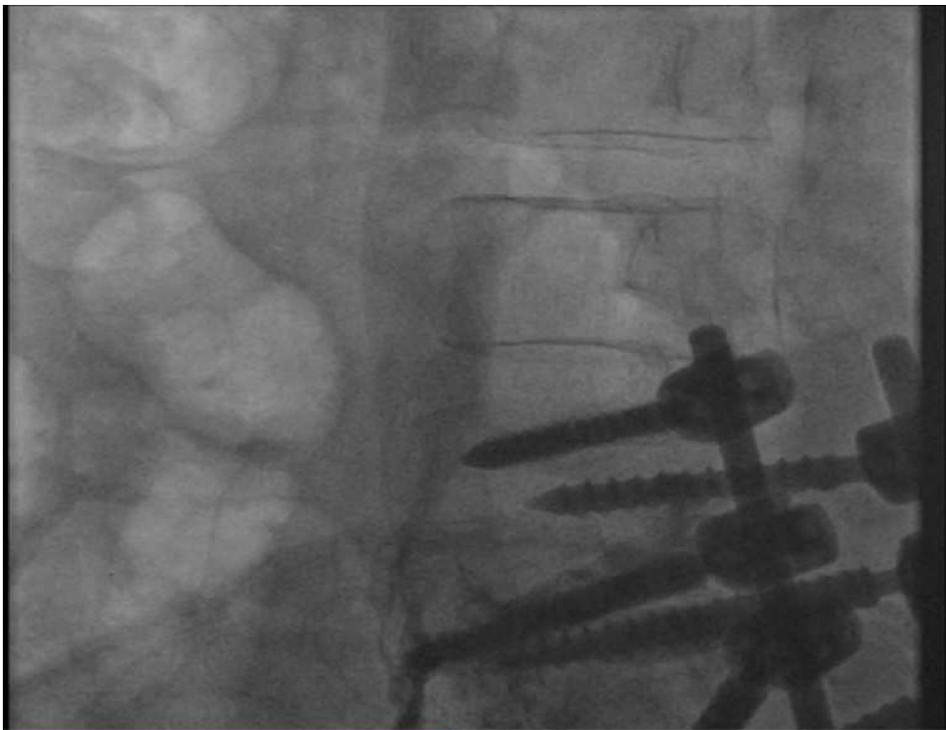
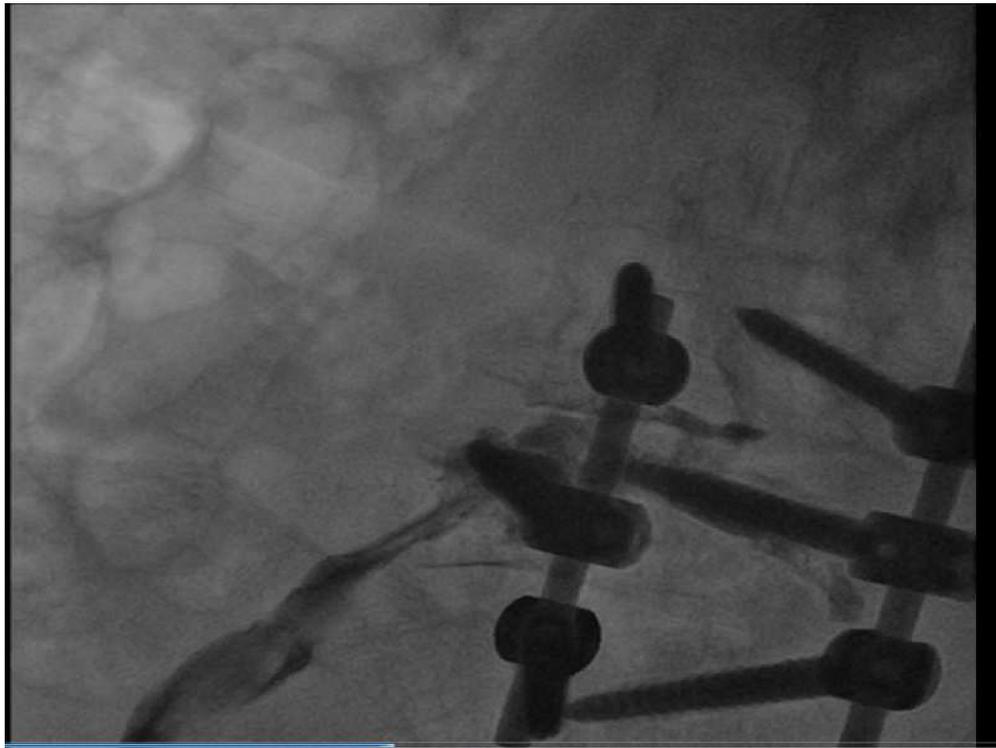


Figure 2: Image showing transpedicle screws compressing on left common iliac vein and venous flow beyond that segment appears normal



**Figure 3:**Lateral view Image showing compression of left common iliac vein by screws

### DISCUSSION

May-Thurner syndrome is a rare condition characterized by iliofemoral deep venous thrombosis (DVT) due to an anatomical variant in which the right common iliac artery overlies and compresses the left common iliac vein against the lumbar spine. This variant was reported to be present in over 20% of the population.

This compression is associated with intimal hyperplasia, which creates the potential for venous stasis and subsequent thrombosis [1]. In spite of many such cases being present, the estimated clinical prevalence of MTS-related DVT is surprisingly low, reportedly occurring in only 2% to 3% of all lower extremity DVTs [2]

Kim et al,[3] described clinical stages of this condition as follows: *Stage 1* is asymptomatic iliac vein compression, *Stage 2* is the development of a venous spur and *Stage 3* is development of left iliac vein DVT. Arterial pulsations adjacent to the vein leads to the accumulation of elastin and collagen, contributing to spur formation and extensive local intimal proliferation, impaired venous return and venous thrombosis.

However earlier case report of may thurner syndrome secondary to external compression from placement of an aortic stent graft for aneurysm repair has been reported.[4]

Other rarer causes for compressions of iliac vein such as from distended bladder after stroke,[5] from crossed fused renal ectopia,[6] and from renal transplant lymphocele[7] has been reported in earlier publications.

We hereby report unusual cause of may thurner like syndrome wherein transpedicular screwing done for spondylolisthesis, compressing on left iliac vein resulting in Deep vein thrombosis which was successfully managed by catheter directed thrombolysis and decompression procedure. This case being reported for its rarity and to highlight the need for careful past treatment history which would help for proper diagnosis and prevent major catastrophic events.

## REFERENCES

- [1] May R, Thurner J. The cause of the predominantly sinistral occurrence of thrombosis of the pelvic veins. *Angiology*. 1957;8(5):419–427.
- [2] O'Sullivan GJ, Semba CP, Bittner CA, Kee ST, Razavi MK, Sze DY, Dake MD. Endovascular management of iliac vein compression (May-Thurner) syndrome. *J Vasc Interv Radiol*. 2000;11(7):823–836.
- [3] Kim D, Orron DE, Porter DH. Venographic anatomy, technique and interpretation. In: Kim D, Orron DE (eds.) *Peripheral Vascular Imaging and Intervention*. St Louis (Missouri); Mosby-Year Book; 1992, pp 269–349.
- [4] Amrita S. Pandit, Maura Hayes, Sheila Guiney-Borgelt, and Alan M. Dietzek, Danbury, Connecticut: Iatrogenic MayeThurner Syndrome After EVAR *Ann VascSurg* 2014; 28: 739.
- [5] Im S, Lim SH, Chun HJ, Ko YJ, Yang BW, Kim HW. Legedema with deep venous thrombosis-like symptoms as an unusual complication of occult bladder distension and right MayeThurner syndrome in a stroke patient: a case report. *Arch Phys Med Rehabil* 2009;90:886.
- [6] Elsharawy MA, Moghazy KM, Alsaif HS, Al-Asiri MM. Unusualcase of left iliac vein compression secondary to maythurnersyndrome and crossed fused renal ectopia. *SaudiMed J* 2008;29:603
- [7] Vyas S, Roberti I, McCarthy C. MayThurner syndrome in apediatric renal transplant recipient:case report and literaturereview. *Pediatr Transplant* 2008;12:708.