Compression of the Iliac Veins Caused by Endovascular Aortic Aneurysm Repair

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I do not have any potential conflict of interest
Introduction

• May-Thurner Syndrome (MTS) is characterized by unilateral lower extremity venous stasis due to compression of left iliac vein by the right iliac artery and the lumbar spine.

• May-Thurner like syndrome may be created as a result of iliac artery stenting.

• We present a case of bilateral iliac vein stasis caused by bilateral iliac vein compression after aortobiiliac endovascular repair.
Case Presentation

• 82 year-old male underwent abdominal aortic aneurysm endovascular repair using Medtronic endograft 5 years ago.

• Since then, the patient has gradually developed edema, erythema, and skin atrophy of the lower extremities, which progressed to pre-ulcer status.

• Venogram and intravascular ultrasound showed significant compression of bilateral iliac veins by the aortobi-iliac endograft limbs.

• After crossing of the stenosed iliac veins with wires, performing percutaneous angioplasty, and placement of bilateral iliac vein stents (Medtronic 16 mm x 150 mm), no residual stenosis was identified.

• Subsequently, leg swelling and pain improved gradually.

• The patient was maintained on Plavix and ASA.
Discussion

• May-Thurner syndrome is characterized by unilateral venous hypertension and stasis due to extrinsic compression of the left iliac vein by the right iliac artery and L5 vertebral body.

• Left iliac vein compression may be physiologic and harmless.

• In symptomatic patients however, it may lead to acute and chronic consequences.

• Diagnosis may be challenging, and ultrasound is a common initial study.

• Computed tomography or magnetic resonance imaging can be used to demonstrate narrowing of the iliac vein and identify other potential causes of clinical symptoms.
Discussion

• Venography and intravascular ultrasound are the most accurate diagnostic tools.
• Endovascular treatment with iliac vein stenting is highly successful.
• Rare causes of MTS include iliac artery aneurysm, distended bladder and endometriosis, and orthopedic hardware and penile prosthetic reservoir.
• Endovascular stenting of an iliac artery causing MTS is a rare phenomenon.
• Endovascular stenting can cause unilateral or bilateral compression of the iliac veins.
• Symptoms can present as acute or chronic.
Conclusion

• Iliac vein compression after iliac artery stenting, including endovascular aortic aneurysm repair, is a rare complication that requires a high index of suspicion for the provider to recognize, diagnose, and treat.

• While the true incidence rate of MTS is unknown, I have diagnosed and treated 4 cases in my practice over the past 3 years.

• As this case suggests, an increased prevalence of atypical MTS may be a result of treating abdominal aortic aneurysm with endovascular stenting.

• Iliac vein stenting may be used successfully to restore venous patency.
Thank You!