The role of 3D venous angiography and IVUS in diagnostic and treatment decision in May–Thurner Syndrome
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1 Introduction

May-Thurner Syndrome is the leading cause of left limb DVT, and women are more frequently affected. 3D venous angiography is a new method to help in therapeutic decision.

2 Material; Methods

21 years old, female patient complaining of left lower limb pain, swelling, and limiting venous claudication. Taking anovulatory, smoker. Color Doppler ultrasonography revealed critical stenosis with left iliac maximum velocity very low, with iliac index LICV/RI CV= 0.4 collaterals and reversal flow in left internal iliac vein, with a stenosis degree of 75%. Pelvic angiotomography identified a stenosis of 50%. 3D venous angiography identified left iliac vein flattening till cava ostium and significant narrowing in the proximal portion of the vein. 3D venous angiography shows a 95% stenosis and IVUS of 99%. Treatment option was placement of a self-expanding stent in left common iliac vein and distal portion of vena cava.

Devices: 12 F introducer, 0.035 guidewire, self expanding stent 20x100 mm (SiOxx), 18x60 mm angioplasty balloon, IVUS PV 0.035 Volcano. Equipment: Philips Azurion

3 Results

Technical success was achieved, images and IVUS showed complete stenosis resolution without any residual stenosis and collaterals disappeared entirely.

Patient evolved with clinical improvement, with complete relief of pain and venous claudication. Was discharged in 24 hours taking aspirin 100 mg, clopidogrel 75 mg and rivaroxaban 15 mg daily.

4 Conclusion

As 3D venous angiography is performed in more than 25 incidences, it is highly superior to DSA (3 incidences); therefore, it identifies more precisely the compression degree and the extension of venous compression, helping to select stent size and best place to deploy.

Indeed, 3D venous angiography in conjunction with IVUS had a very important role in the decision made in this case and, if available, should be considered. It represents a helpful tool to diagnosis and treatment choice in May-Thurner Syndrome.