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## INVITED COMMENTARY

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Chronic total occlusions (CTOs) constitute an estimated 5% to 10% of post-thrombotic stenoses of the iliac vein in reported series. The disease often extends into adjacent segments of vena cava and femoral veins. Only a handful of large series (>25 cases) currently exist. This University of California-Los Angeles experience is a useful addition to this limited compendium. The focus of analysis in this series is infrainguinal stent extension with CTO recanalization. These cases appear to trend toward a lower patency. This is probably because the need for stent extension below the groin indicates a more severe post-thrombotic disease than in others who do not require such an extension.<sup>1</sup> Extensions across the hip joint are benign, with excellent patency in nonthrombotic patients; stent fractures and erosions of the Wallstent (Boston Scientific, Marlborough, Mass) are extremely rare in venous applications unlike in arterial stenting.

The University of California-Los Angeles experience closely mirrors the demographics, methods, and results reported in other series. The authors provide a succinct review of current literature and highlight unresolved issues in the lucid discussion accompanying their analysis. Iliac vein CTO lesions are different in pathology from arterial CTOs. Procedural technique is therefore different. Dispersed throughout the manuscript are many tips for treating iliac vein CTO lesions. These can be summarized as follows:

- Lytic therapy to “soften” up the occlusive lesion greater than 30 days duration to facilitate recanalization is of dubious benefit.
- Angioplasty alone of venous stenotic lesions is not as effective as stenting of the lesions.
- All contiguous lesions should be treated to maximize inflow and outflow of the recanalized segment.
- Large-caliber stents should be used.
- Early duplex ultrasound monitoring of the stent is important as the majority of stent occlusions after recanalization occur within 30 days. These are often due to inflow problems.
- The authors recommend extending the stent stack below the inguinal ligament when needed (often) to provide for good inflow.
- It is probably better to remove inferior vena cava filters encased in the CTO lesion. If this is not possible, a practical (and only) endovenous option is to compact the filter and stent across. These cases seem to do well in the near term.

These are solid recommendations for treating this challenging disease.

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