

Response to “In-stent restenosis and stent compression in iliofemoral venous stents”

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To the Editor,

We are very grateful for Dr. Taimur Saleem’ recognition and comments on our recent research. Generally, we agree with these comments and respond as follows.

IVUS has many advantages in the diagnosis of iliac vein compression syndrome (IVCS), and it remains the gold standard for diagnosing iliac vein lesions according to current literature (1-3). However, as we mentioned in our study (4), IVUS is not popular in China due to various reasons, while CTV is more commonly used as a method of diagnosis and postoperative evaluation. Indeed, further work is necessary to clarify the accuracy and how to improve the effectiveness of CTV in diagnosing in-stent restenosis (ISR) and stent compression (SC) after iliac vein stenting, since CTV is non-invasive, and more convenient and cheaper than IVUS.

For the correlation between duplex ultrasound (DUS) and CTV findings, we have conducted a study comparing the diagnostic accuracy of DUS with contrast-enhanced ultrasound (CEUS) for the detection of iliac vein stent stenosis using CTV as the reference method (5). Results showed that DUS and CTV had moderate agreement ($\kappa=0.516$) for ISR diagnosis, while CEUS and CTV had very good agreement ($\kappa=0.884$). The sensitivity and specificity of DUS and CEUS for diagnosing ISR were 63.1% and 90.8%, 87.8% and 97.3%, respectively.

According to current literature, antithrombotic therapy after iliac vein stenting in patients with non-thrombotic iliac vein compression syndrome (NTIVCS), either alone or in combination use of anticoagulation and antiplatelet therapy, has not been uniformly recommended, mainly due to the lack of high-level evidence such as prospective randomized studies. Our empirical use of rivaroxaban is largely based on the understanding of the venous system that coagulation may be more important in the fibrin-rich thrombi characteristic of the low-flow, low-shear venous circulation (6). As postoperative antithrombotic regimens vary among studies and recommendations throughout the reported literature range from 1 to 3 anticoagulant or antiplatelet agents with variable duration of therapy, further understanding of the roles of platelet activation and the coagulation cascade after stenting in venous system and the time to initiate and duration of use and dosage schedule of antithrombotic agents is needed to better guide adequate postoperative medications.

Since all the cases included in our study were patients with NTIVCS and no trans-inguinal ligament stent was involved, the correlation of stent extension below the inguinal ligament and ISR/SC was not covered in this study (4).

Although ISR and SC are both common after iliac vein stenting, stent occlusion is always rare. As we mentioned in our study (4) that SSC was associated with ISR’s occurrence rate but the progression of ISR to stent occlusion was not observed, which is consistent with the latest literature (7) that neither of ISR nor SC are relentlessly progressive, clinical intervention should be considered preferentially based on a residual or recurrence of symptoms and not the percentage of ISR or degree of SC.

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