Minimally invasive techniques for treating reflux disease in the saphenous system have greatly improved the quality of life and comfort of those suffering with chronic venous disease and more advanced venous insufficiency. Painful procedures of the past, sometimes including hospital stays, have largely been replaced by safe and efficacious office procedures (lasting often less than an hour) with minimal subsequent activity restrictions.

Despite these obvious advantages, these therapies do have a very low but definite risk of thrombotic complications, including endovenous heat-induced thrombosis (EHIT) superficial venous thrombosis (SVT) and deep vein thrombosis (DVT). EHIT includes development of a blood clot at the junction of one of the treated saphenous veins and the femoral or the popliteal vein.

While major DVT and pulmonary embolism are extremely rare, the diagnosis of EHIT may require a period of anticoagulation as well as follow-up visits and studies. Further, acute SVT can be painful for several weeks following the procedure. As such, further understanding the risk factors for these complications will allow therapists to better inform patients as to their specific risks for developing them.

As reported in the January 2018 edition of the Journal of Vascular Surgery: Venous and Lymphatic Disorders, researchers from Total Vascular Care and NYU Lutheran Medical Center led by Afsha Aurshina, MBBS, evaluated their large single center experience treating multiple vein types using both radiofrequency (RFA) and endovenous laser (EVLA) ablation techniques. They retrospectively studied the outcomes of 1811 procedures performed on 808 patients from 2012-2014. The aim of the study was to define better the success and thrombotic complications of these procedures with respect to technique and vein type.

Overall success (defined as absence of reflux in the targeted vein by post-operative duplex) rates included:

- RFA 98.4% (excluding perforating vein)
- EVLA 98.1%
- Great saphenous (GSV) 98.5%
• Lesser saphenous (LSV) 98.2%
• Accessory saphenous (ASV) 97.2%
• Perforator (PV) 82.4%

With regards to thrombotic complications, the authors reported EHIT rates of:
• Class 1-4 5.9%
• Class 2-4 1.16%

Acute superficial thrombosis rates included:
• Overall 4.6%
• RFA 7.7%
• EVLA 11.4% (no difference in multi-factor analysis)
• GSV 11.8%
• LSV 5.5%
• ASV 6.5%
• PV 2.4%

“Our study demonstrates that there is no significant difference in the success rate of RFA and EVLA in the treatment of venous reflux for GSV, SSV, and ASV,” notes first author Aurshina. “We found an acceptably low incidence of clinically significant thrombotic complication rates for EHIT and acute superficial thrombosis, with only a 1.16% risk of Class 2-4 EHIT, that may require short term anticoagulation. We noted risk factors for these complications, after multi-factor analysis, include higher vein diameter and type of vein, with the latter being the most important.”

Large experiences such as these are important to understand the true incidence of these complications and how practitioners might tailor their consent process with their patients.

To download the complete article (link available free from 12/14/2017 through 2/28/2018), click:
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Regarding varicose veins:
https://vascular.org/patient-resources/vascular-conditions/varicose-veins
Regarding deep venous thrombosis:
https://vascular.org/patient-resources/vascular-conditions/deep-vein-thrombosis

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