Superficial Reflux With Obstructed Deep Veins: When And When Not To Treat

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Post-DVT ... When Safe To Intervene?

Pulmonary Embolus (Acute Phase)

Post-thrombotic Syndrome (Chronic Phase)
The two consequences of are the presence of thrombus:
1. outflow obstruction, and
2. reflux caused by valve damage

Recanalization begins soon after DVT

The percentage of initially involved segments that remained occluded decreased to a mean of 44% by 30 days and to 14% by 90 days

VTE increases CVD severity

25% of limbs dev CVI (C4-C6) s/p DVT @at 5 years
4x higher than primary group
(P=.019)

Rational For Early Clot Removal Strategies (Iliofemoral)

A combination of obstruction and reflux appears to be clearly associated with severity of CVD symptoms (Venous Hypertension)

Patients with venous occlusion have leg swelling and experience exercise-induced pain in the thigh, and occasionally the calf muscles. Such venous claudication is described as a "bursting" pain that is relieved by rest and elevation of the legs.

**Obstruction Dominant**

- Typical symptoms: aching, pain, tightness, skin irritation, pruritus, heaviness, tingling, muscle cramps, and cosmetically unsatisfying varicose veins.
- Symptoms often worsen during the course of the day and with prolonged standing. Patients with more severe insufficiency can present with complaints of edema, skin changes, or ulceration.

**Reflex Dominant**

- Typical symptoms: aching, pain, tightness, skin irritation, pruritus, heaviness, tingling, muscle cramps, and cosmetically unsatisfying varicose veins.

Saphenectomy, n= 51 limbs without obstruction, and 64 limbs with varying grades of venous obstruction

Saphenectomy well tolerated in all limbs and no difference in outcome was noted as measured by objective tests for obstruction

Improvement in reflux and calf venous pump function was largely similar

Saphenous vein contributes little to the collateral compensation in patients with obstructive disease and that the vein may therefore be surgically removed

Raju S, Surgery 1998;123:637-644

Saphenectomy In Patients With Chronic Venous Obstruction Due To Previous DVT

- Compared 29 patients with previous DVT to 264 patients without previous DVT
- Saphenous reflux treated with RFA +/- phlebectomy and perforator treatment
- By multivariate analysis, larger proximal GSV and previous DVT were significant risks for recurrent DVT
- They concluded that RFA of the GSV in patients with previous DVT is safe


Use of low molecular-weight heparin for perioperative prophylaxis by a risk-adjusted protocol in patients undergoing EVLA did not have a significant effect on thrombotic complications

Until further prospective, randomized studies on DVT prophylaxis in this subset of patients become available, periprocedural anticoagulation not justified because increased bleeding complications


**Perioperative VTE Prophylaxis EVLA**

**RFA Of The GSV In Patients With Previous DVT**

**Combined Saphenous Ablation & Iliac Stent Placement For Severe Chronic Venous Disease**

99 limbs, CEAP 4-6 (41% with previous DVT) followed 4 years

Cumulative primary, assisted primary, and secondary stent patency rates - 83%, 97%, and 97%

Complete relief of pain (VAS 0) = 73%
Complete relief of swelling (grade 0) = 47%
Cumulative ulcer-healing rate = 64%

Early DVT occurred in only one patient in the contralateral iliofemoral vein 27 days after the intervention

Conclusion:

Saphenous ablation may benefit patients with previous DVT – clearly not during acute phase of DVT

When Is It Safe?

Limbs with concomitant superficial reflux and deep venous obstruction can be safely treated by combined saphenous ablation and iliac stent placement

DVT prophylaxis administered at the surgeon’s discretion

Thank you!