

CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE

CONTROVERSIES & UPDATES IN VASCULAR SURGERY

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MARRIOTT RIVE GAUCHE & CONFERENCE CENTER, PARIS, FRANCE

How can we decide if a proximal
venous occlusive lesion is significant?

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Disclosure

Speaker name:

Mr Manj Gohel MD FRCS FEBVS

- ✓ I have the following potential conflicts of interest to report:
- ✓ Consulting: Medtronic, Cook Medical
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company
- ✓ Other
- ✓ Research Grant: Laboratoires Urgo
- ✓ Travel support: Gore, Endologix



C1

Reticular veins



C2

Varicose veins



C3

Oedema



C4

Skin changes



C5

Healed & active ulceration

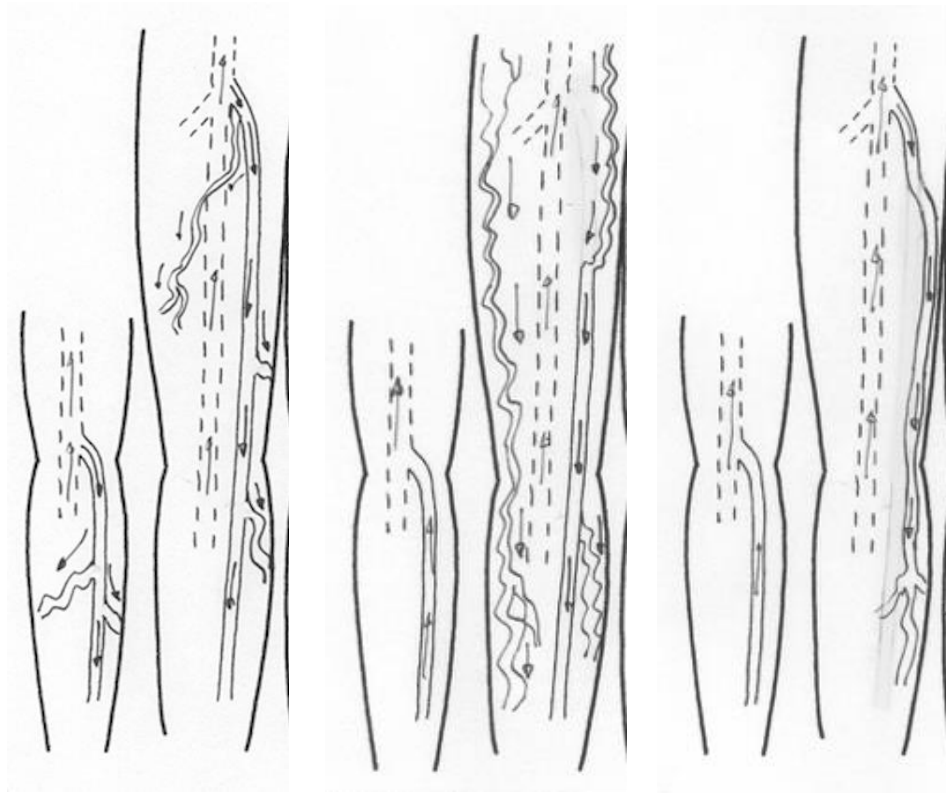


C6

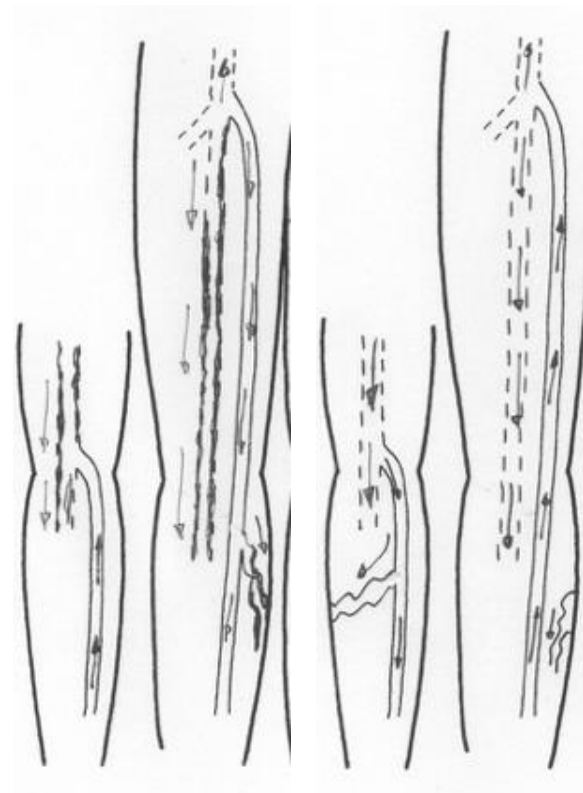




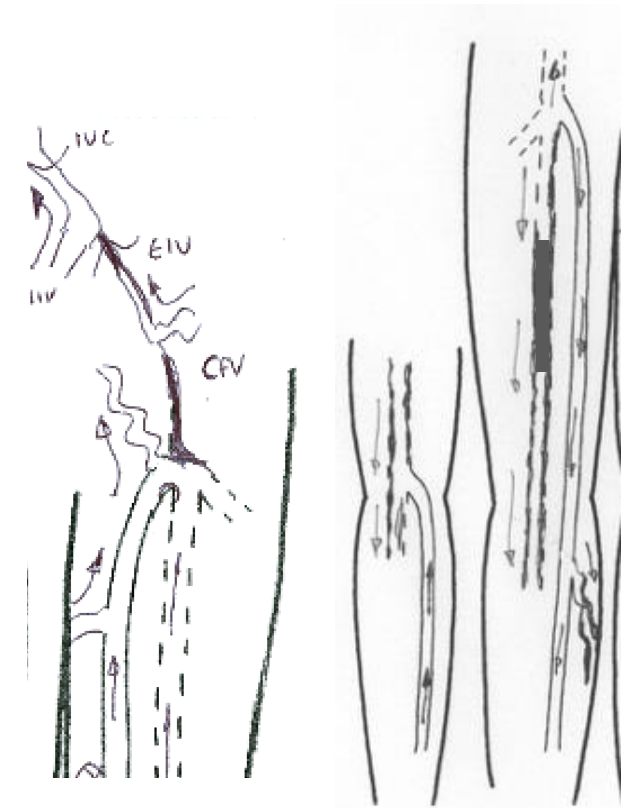
Spectrum of venous disease



Patterns of superficial reflux



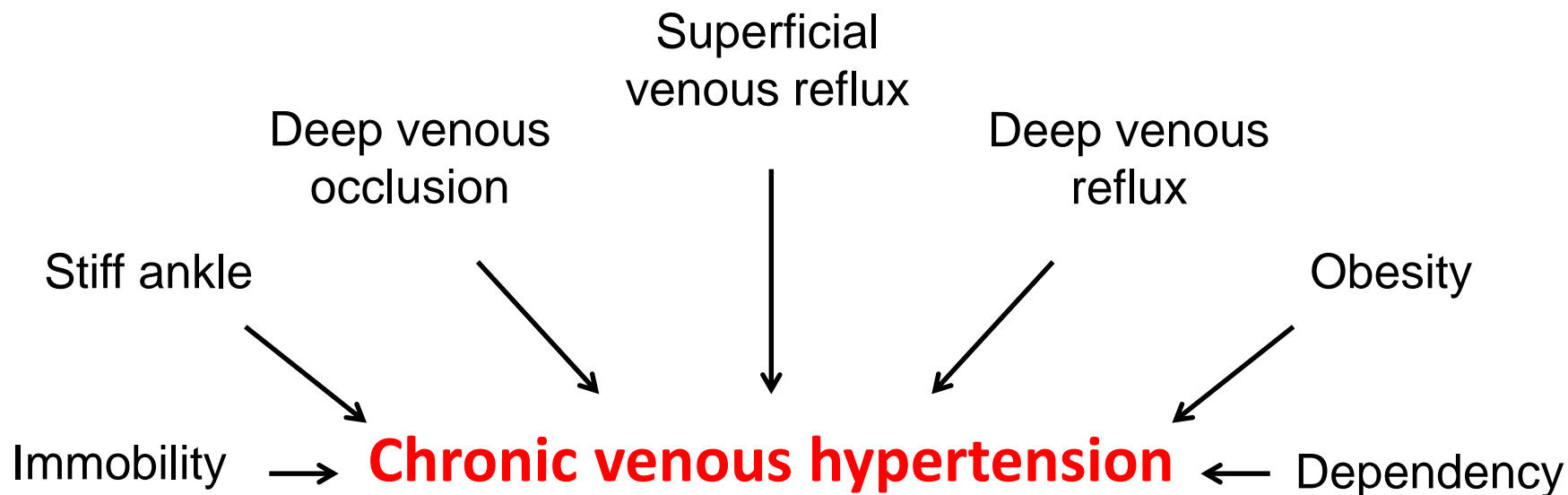
Superficial + deep reflux



Superficial + deep obstruction



Aim to reduce venous hypertension



The same anatomical occlusive disease, may have dramatically varying significance in different patients



44 year old male
No symptoms
Minimal leg swelling



26 year old female
Severe left leg venous claudication



Why not just treat the superficial reflux?

Patient will be no better

Patient will be worse

Risk of DVT



Why not just treat the superficial reflux?

Saphenectomy in the presence of chronic venous obstruction

Seshadri Raju, MD, Lee Easterwood, BS, Todd Fountain, BS, Ruth K. Fredericks, MD, Peter N. Neglén, MD, and Meenakshi Devidas, PhD, Jackson, Miss.

Background. The results of saphenectomy in patients with morphologic and functional obstruction were compared with those in patients without obstruction. Excision of secondary saphenous varices associated with deep venous obstruction has long been considered contraindicated for fear of compromising its collateral contribution. Recent advances in accurate functional assessment of venous obstruction make it possible to test this concept.

Methods. Saphenectomy was carried out in 51 limbs without morphologic or functional obstruction and 64 limbs with varying grades of venous obstruction. Significant deep venous obstruction on ascending venography was present in the latter group. Functional assessment of obstruction was based on the arm/foot venous pressure differential technique, outflow fraction measurements, and outflow resistance calculations. Valve reconstruction was carried out in conjunction with saphenectomy in 81% of cases.

Results. Saphenectomy was clinically well tolerated in both groups, and there was no difference in outcome as measured by objective tests for obstruction; improvement in reflux and calf venous pump function was largely similar. Among seven limbs with severe preoperative venous obstruction (grade III or IV), five (70%) had significantly improved obstructive grading, presumably as a result of elimination of reflux flow.

Conclusions. The traditional admonition against removal of secondary varices should be reexamined. Saphenectomy may be indicated in postthrombotic syndrome with mixed obstruction/reflux. The procedure is clinically well tolerated and without malsequela. Improvement in reflux parameters without significant worsening of objective measures of obstruction is documented in this group. (Surgery 1998;123:637-44.)

Saphenectomy in 51 limbs without
and 64 limbs with deep obstruction

Similar improvements in function /
outcome in both groups



Why not just treat the superficial reflux?

The safety of radiofrequency ablation of the great saphenous vein in patients with previous venous thrombosis

Alessandra Puggioni, MD, Natalie Marks, MD, RVT, Anil Hingorani, MD, Alexander Shiferson, DO, Saadi Alhalbouni, MD, and Enrico Ascher, MD, *Brooklyn, NY*

Background: The safety of radiofrequency ablation (RFA) of the great saphenous vein (GSV) in patients with previous history of deep venous thrombosis (DVT) has not been determined.

Methods: From April 2003 to June 2006, 274 patients (68% women; mean age, 60 years \pm 15 years) underwent 293 consecutive RFA procedures. In the first 15 months, the temperature probe was maintained at 85°C, with a pullback rate of 2 cm/min (85 limbs, 30%); we subsequently changed the protocol to 90°C and a pullback rate of 2 to 3 cm/min (205 limbs, 70%). We identified 29 patients (10%) with a history of DVT or duplex scan evidence of post-thrombotic venous disease; these were compared with the remaining 264 (90%). Postprocedural acute thrombotic (AT) events were analyzed. By the CEAP classification, 204 limbs (70%) were C₂ to C₄, and 89 (30%) were C₅ to C₆. Thirty-seven patients (13%) had a history of superficial thrombophlebitis (SVT). Proximal mean GSV diameter was 0.95 \pm 0.29 cm (range, 0.4-2.3 cm). Concomitant procedures included avulsion phlebectomy in 88 limbs (30%) and perforator vein surgery in 4 (1%).

Results: AT events after RFA were detected in 38 limbs (13%), including thrombus protrusion into the sapheno-femoral junction (SFJ) in 24 (8%), common femoral vein in 7 (2.5%), and calf vein DVT in 7 (2.5%). Overall incidence of AT events in limbs with and without evidence of previous DVT was 7% (2 of 29) and 14% (36 of 264), respectively ($P = .36$). Variables significantly associated with AT events were previous SVT (10 of 37 [27%] vs 28 of 256 [11%], $P = .01$), a larger GSV diameter (mean 1.1 \pm .39 vs 0.93 \pm 0.27, $P < .01$), and first protocol (catheter temperature of 85°C with a slower pullback rate in 18 of 88 [20%] vs 20 of 205 [9.7%], $P = .02$). Concomitant venous operations were associated with an increase in AT events (23% vs 9%; $P < .002$). By multivariate analysis, larger proximal GSV diameter and previous SVT remained independently statistically significant ($P = .049$ and $P = .0135$, respectively). All AT patients were successfully treated with standard anticoagulation. No pulmonary emboli occurred.

Conclusion: RFA of the GSV in patients with previous venous thromboembolic events is safe and should be offered as an alternative to surgical procedures. These data demonstrate that AT events increase when larger-diameter GSVs are treated. (*J Vasc Surg* 2009;49:1248-55.)

Saphenous RFA in 29 patients with
previous DVT / obstruction

Outcomes no worse in patients
with previous DVT



44 year old male

Previous DVT

C4b disease

Improved with compression

RIGHT :

Competent CFV.

The SFV is incompetent and contains chronic non-occlusive thrombus throughout.

The Popliteal vein is incompetent and also contains chronic non-occlusive thrombus.

The SFJn is incompetent with significant reflux feeding and incompetent LSV.

The LSV feeds medial calf varicosities which contain minor chronic thrombus.



Clinical picture

Risk factors for PTS

Venous claudication

Disproportionate signs

Venous duplex imaging

Loss of normal phasicity

Post-thrombotic scarring in CFV

Cephalad flow in groin tributaries



44 year old male

Previous DVT

C4b disease

Improved with compression

RIGHT :

Competent CFV.

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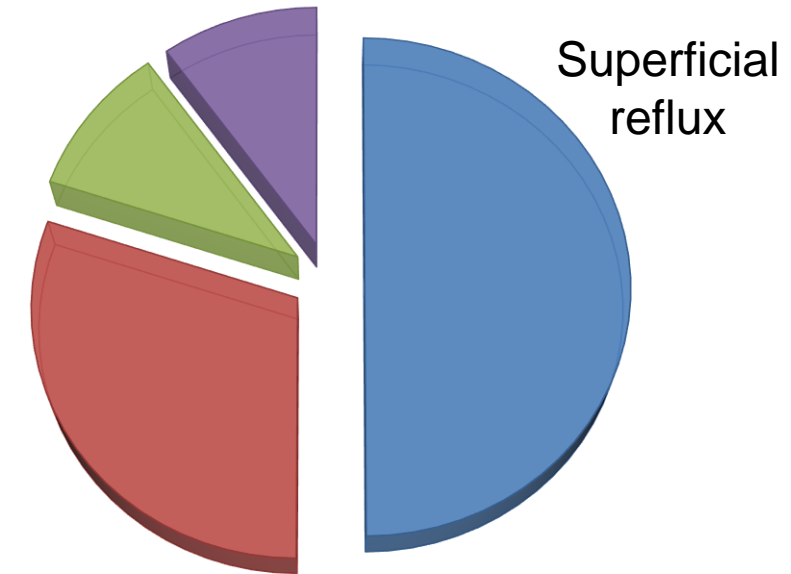
The SFJn is incompetent with significant reflux feeding and incompetent LSV.

The LSV feeds medial calf varicosities which contain minor chronic thrombus.



Venous hypertension

Factors



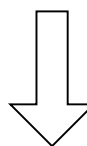


Clinical assessment: is there significant disease to warrant treatment? Indications of pathology

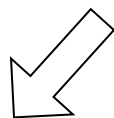
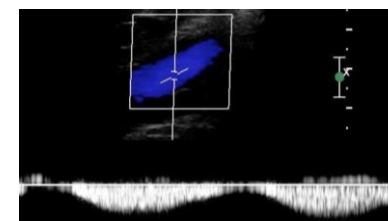




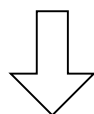
Clinical assessment: is there significant disease to warrant treatment? Indications of pathology



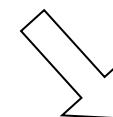
Colour duplex assessment



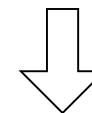
No suggestion of significant proximal occlusive disease



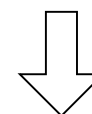
Treat superficial reflux
Compression therapy



Suspicion of significant proximal occlusive disease



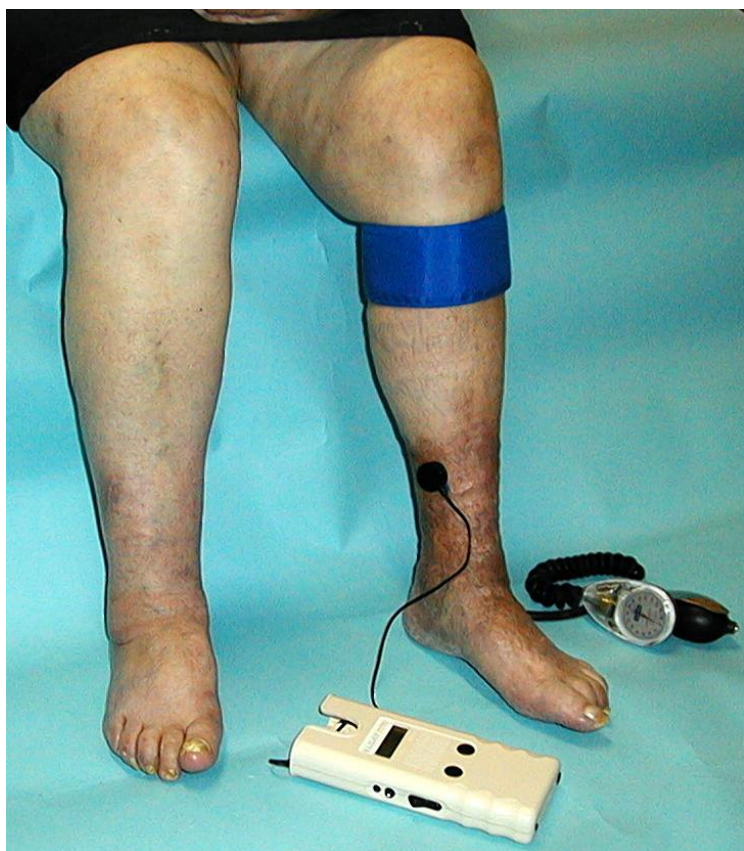
MRV +/- venogram



Proceed with stenting

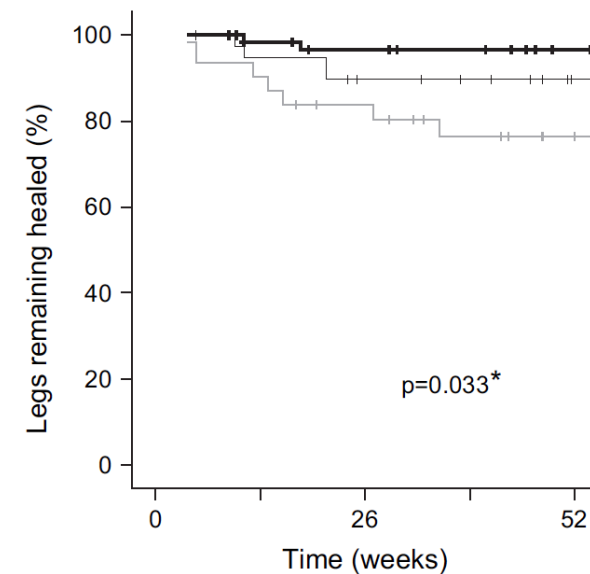
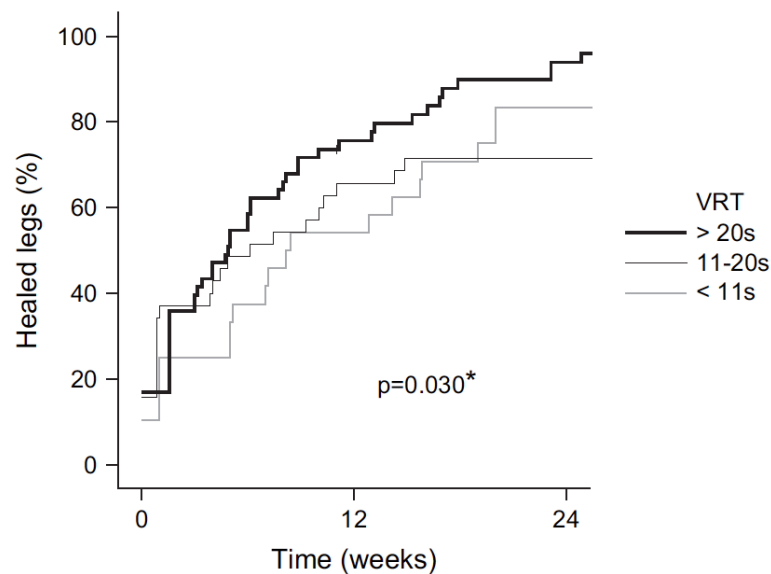


Haemodynamic assessment



The Predictive Value of Haemodynamic Assessment in Chronic Venous Leg Ulceration

M.S. Gohel,¹ J.R. Barwell,¹ B.P. Heather,² J.J. Earnshaw,² D.C. Mitchell,³
M.R. Whyman¹ and K.R. Poskitt^{1*}





Conclusions

Each decision has to be made on a case by case basis (clinical assessment + additional tests)

Significant iliac venous occlusive disease should probably be treated first

Ablation of superficial reflux is probably safe in most patients
(remember VTE prophylaxis)



Rodin
"The thinker"