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Balkan Venous Forum

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VARICOSE VEINS RECURRENCE - CAN WE AVOID IT?

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Disclosure

I have no actual or potential conflict of interest in relation to this presentation
Objective

• to investigate the incidence, the clinical and socio-medical significance of the disease

• to provide an overview of the current understanding of the etiology and pathogenesis of RVV

• to determine the anatomy, source, and contributory factors of varicose veins recurrence
To answer the question

Is it possible to avoid recurrence ????
Why is recurrent varicose veins important?

- Treatment for RVV technically more difficult
- Debilitating and costly problem
- Patient satisfaction is poorer than after primary intervention
Data on recurrent disease is difficult due to:

- Initial treatment
- Definition of recurrence
- Variability in follow up
An international consensus meeting held on recurrent ‘varices after surgery’ (REVAS) in Paris in 1998 clinical definition:

“The existence of varicose veins in a lower limb previously operated on for varicosities, with or without adjuvant therapies, which includes true recurrences, residual veins and new varices, as a result of disease progression.”

Variability in follow up

Using the REVAS criteria following open surgery reported at rates RVV:

- 6.6% to 37% after 2 years
- up to 51% after 5 years

Radiologic versus clinical recurrence

• a prospective study of UGFS in the treatment of GSV reflux in 203 legs (146 patients) the 5-year
• duplex ultrasound recurrence was 64%
• clinical recurrence 4%

Pathogenesis and etiology of recurrent varicose veins

A systematic search of the PubMed database

- **1439** articles identified, **26** are included
- Recurrent VV 13-65%
- Results were similar between surgery and EVA
- **Three types of RVV:**
  - Residual varicose veins
  - True recurrent varicose veins
  - New varicose veins
- **Etiology of recurrences:**
  - Inadequate treatment (Tactical and technical errors)
  - Recanalization and collateralization
  - Neovascularization
  - Disease progression

Etiology of recurrences

Inadequate treatment (Tactical and technical errors)

Tactical errors

• Common to all operative treatments
• Wrong or incomplete diagnosis
• Extent and/or location of varices
• Source of reflux
• Identification of deep venous anomalies including pelvic reflux
• Post-thrombotic syndrome

Technical errors

Surgery
• Non flush ligation at the saphenofemoral (SFJ) or at the saphenopopliteal junction (SPJ)
• Failure to strip the GSV when it snaps is also a frequent occurrence

Thermal ablation
• delivering insufficient energy (recanalization of the treated vein)

Sclerotherapy
• Inadequate technique
• Inappropriate sclerosing agent dose

Surgery

• Open surgery remains the most common varicose vein intervention at present in the United Kingdom; approximately 24,000 operations are carried out annually.
According to REVAS criteria

Source(s) of reflux feeding the recurrence

*more than one source may be involved*

- Pelvic or abdominal: 17%
- Saphenofemoral junction: 47%
- No source of reflux: 10%
- Incompetent perforators: 75% of legs

Neovascularization (20%) was as frequent as technical failure (19%) and tactical error (10%).

*Presence of varices after operative treatment: A review, Perrin, M, 2015 Phlebolymphology. 22. 5-11.*
Residual stumps associated with inguinal varicose vein recurrences

- In patients with symptomatic groin recurrences, a long residual sapheno-femoral stump was found in about two thirds of cases.
Endovenous thermal ablation

- The patterns of recurrence are different to those seen after surgery
- New reflux in other saphenous veins (AAGSV – SSV) is responsible for most of recurrences
- Neovascularity seems to be unusual

Factors Associated with recurrence of varicose veins after thermal ablation

- Retrospective cohort study (REVATA)
- Seven centers a 1-year period
- Thermal ablation of the GSV, SSV, or AAGSV
- 2380 patients were evaluated
- A total of 164 patients had varicose vein recurrence at a median of 3 years

Results

GSV ablation was the initial treatment in 159

- GSV recanalization in \(29\%\)
- New reflux in un-ablated GSV \(14\%\)
- New AAGSV reflux in \(24\%\)
- New SSV reflux in \(16\%\)
- Perforator pathology in \(64\%\)

Results

- Significant differences between types of laser and GSV recanalization
- Laser with the most failures was the 810 nm wavelength
- 3 of the thermal ablation failures occurred in patients with less than 60 joules/cm of energy
- Laser 1320 nm had no instances of recanalization

Foam sclerotherapy - UGFS

Patient-reported outcomes 5-8 years after ultrasound-guided foam sclerotherapy for varicose veins.

• The aim was to determine the long-term (5-8 years) outcomes of ultrasound-guided foam sclerotherapy (UGFS) for varicose veins

• Retreatment rates

CONCLUSION

• UGFS has durable results

• Only 15.3% of limbs required retreatment for recurrence during follow-up period (5 years)
Progression in venous pathology

The data suggest that reflux progression:

• From segmental to multisegmental
• Of uncomplicated varicose vein (C2) to chronic venous insufficiency (C3–C6)
• In younger age, reflux in tributaries and non-saphenous veins
• In older age, more saphenous reflux and more proximal sites
Conclusion

Is it possible to avoid recurrence?
Suggested strategies for preventing SFJ and AASV recurrence

**Laser crossectomy**


**Prophylactic AASV ablation**

ACP guidelines – Treatment of refluxing saphenous veins

Gibson et al Phlebology 2017; 32:448-52
Concomitant cranial tributary ablation of the SFJ for laser crossectomy of the GSV

- 121 limbs in 112 patients undergoing EVTA (1470nm diode laser)
- Concomitant cranial SFJ tributary ablation with laser crossectomy of the GSV
  - occasionally technically demanding
  - but safe and effective approach to reduce SFJ recanalization
Possible measures to decrease recurrence

• Using **standard protocol**
• Careful evaluation of patients
• Use of duplex ultrasonography pre-and perioperatively during open surgery, endothermal ablation and UGFS
• Endovenous thermal ablation at midcalf level below most of perforators (if applicable)
• In sclerotherapy:
  – use of foam rather than liquid
  – adequate volume of foam in larger veins
Impossible to avoid

Recurrence due to disease progression

We need to talk with our patients about the nature of the disease.
THANK YOU FOR YOUR ATTENTION
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