

Endovenous laser ablation and foam sclerotherapy: a single center experience

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Tx of superficial venous insufficiency revolutionized:

- **Endovenous laser/RF**
- **Ambulatory phlebectomy**
- **Foam/liquid sclerotherapy**

The modern tx of SVI:

Elimination of reflux

- Endovenous laser / RF

Elimination of VV

- Ambulatory phlebectomy
- Foam/liquid sclerotherapy



GSV insufficiency:

**GSV (reason)
should be treated
with endovenous
laser or RF**

Eliminate the reflux



GSV insufficiency:

**Varicose veins
(result) should also
be treated**

- **Ambulatory phleb.**
- **Sclerotherapy**
- **cosmetic reasons**
- **prevent recurrence**



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- **Endovenous laser ablation**
- **Foam sclerotherapy**

- **First case, July 2005, the next 40 days later**
- **December 2006, vascular surgery started**
 - **42 EVL procedures in 17 months**
- **Currently, both dept perform EVL with equal numbers**
 - **66 EVL procedures in 8 months**
 - **Average 10 EVL/month**

Patients

- 25 months, 67 patients (51F/16M) aged 46 ± 13 20-70 years
- all symptomatic, all primary VV
- all superficial reflux, in 6, additional deep reflux +

Procedures



- **108 EVL procedures in 103 limbs:**
 - 87 GSV, 13 bilateral same session
 - 14 SSV,
 - 7 perforating veins
- **In 62, EVL alone**
- **In 46, EVL+foam sclerotherapy**
 - 31 in the same session
 - 15 in a separate session

Technical details



Postprocedure management

- Limited stretch comp bandages + NSAIDs for 1w
- Stockings 30-40mm Hg for 1m

Results

- All technically successful
- Groin puncture in 5:
 - 2 failed access at the knee.
 - 3 unfavorable anatomy
- No major complications
 - DVT
 - Paresthesia
 - Skin burn

Minor complications

- Transient visual disturbance due to foam sclerotherapy ($n=1$)
- Bruising/ecchymoses ($n=34$)
- Postoperative pain that required continuation of NSAIDs ($n=16$)
- Superficial thrombophlebitis ($n=6$)

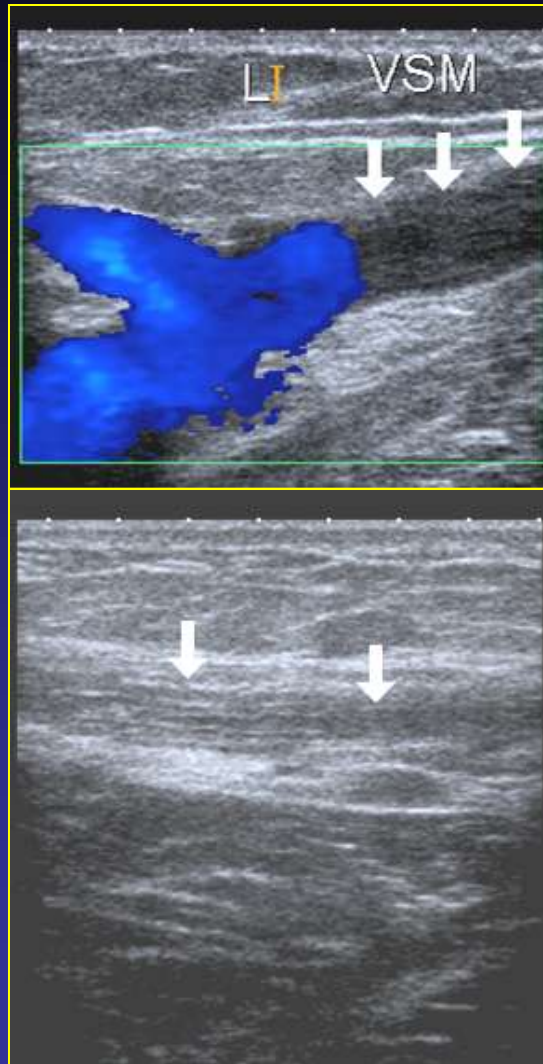
Follow-up

- **At 1 week, all GSV, SSV and PVs occluded. Symptoms of venous insufficiency decreased or disappeared in all.**
- **Varicose veins disappeared or decreased markedly in size.**

Follow-up



Before



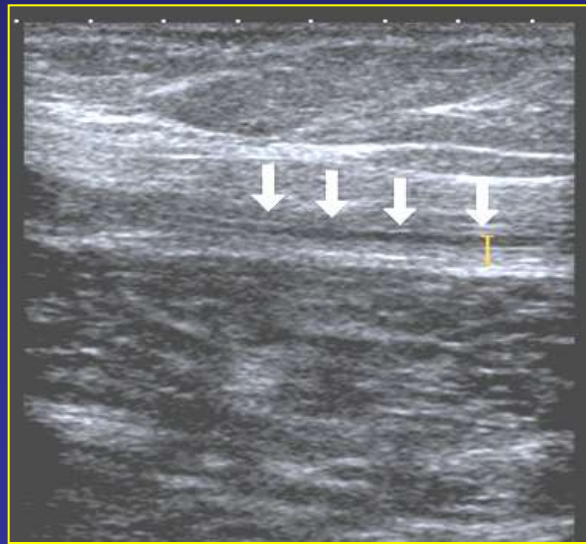
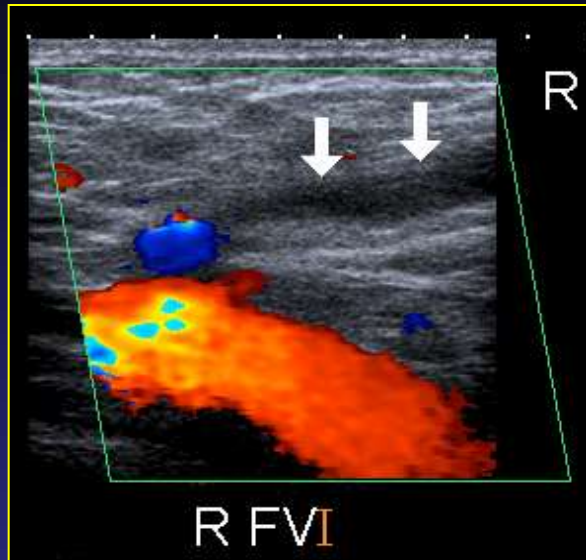
2 mo after EVL+foam



Follow-up



Before



3 mo after EVL+foam



Follow-up

Fu=7±5 months: no recurrence except in 3 GSV and 1 SSV (3-5 months po)

- **2 GSV successfully treated with foam**
- **1 GSV intended to treat with repeat EVL, but failed (impossible to get the guidewire through). Scheduled to be treated with foam**
- **1 SSV not yet treated**

Conclusions

EVL is safe and effective for the elimination of reflux

- **Bilateral EVL, same session**
- **Combined with foam sclero**

Conclusions

Foam sclero safe+effective for tx of varicose veins

- **Very practical**
- **Successful in months**
- **Relatively good cosmesis**

Conclusions

Minimally invasive vein tx feasible in a radiology dept, despite surgical competition

- **Early start advantageous**
- **Publicity to get the cases initially**