


Great Saphenous vein crossectomy ..WHY??

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Disclosure

I don't have any potential conflict

Background

- ▶ Venous system is a network of interconnected vessels; any preserved inflow of the saphenous-femoral mouth can cause postoperative recurrence. However, according to the literature, the greatest risk of recurrence is associated with the stump of GSV of venous tributaries, including great venous trunks parallel to the GSV in the thigh .

Objective

- ▶ Comparison of the Standard Endovenous laser ablation (1.5 – 2 CM. from SFJ) technique versus Crossectomy ablation for the treatment of varicose veins .

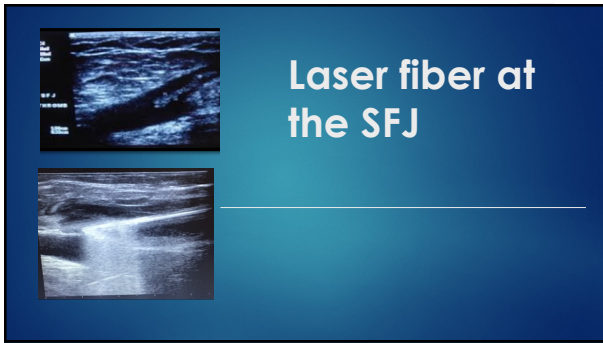
Patients & Methods

- ▶ 80 patients admitted to Ain Shams University hospital & Alexandria Armed Forces Hospital
- ▶ from Jan. 1st, 2021, to Jan. 30th, 2023
- ▶ divided into 2 groups.
 - Group A) treated by ablation of Great saphenous vein at saphenofemoral junction.
 - Group B) treated by ablation of Great saphenous vein at 1.5-2 CM. from saphenofemoral junction.

(Biolitec Ceralas laser machine) and (ELVeS Radial 2ring™ fiber




Ablation was done using radial 1470 Diode Double ring laser fibers and using a large amount of tumescent anesthesia. Post-operative Duplex was done one day, 3 month and one-year.



Laser fiber at the SFJ

Demography

- ▶ **Age**
- ▶ Group A) 28-44 with a mean age 34.6+ 0.4 years
- ▶ Group B) 25-50 with a mean age 35.2+ 0.3 years
- ▶ **Gender**
- ▶ Male to female ratio was 14/6 & 12/8

Demography

		Mean ± SD N (%)
Height in m		1.73 ± 0.09
Weight in kg		91.74 ± 10.3
Body mass index		30.8 ± 3.03
Smoker	No	49 (61.25%)
	Yes	31 (38.75%)
Procedure	Standard	40 (50%)
	Crossectomy	40 (50%)

Clinical presentations

		N (%)
SIDE Affected	Left	51 (63.75%)
	Right	29 (36.25%)
Heaviness	No	3 (3.75%)
	Yes	77 (96.25%)
Unsigthness	No	28 (35%)
	Yes	52 (65%)
Dilated veins	No	27 (33.75%)
	Yes	53 (66.25%)
Edema	No	61 (76.25%)
	Yes	19 (23.75%)

CEAP Stage

Clinical Presentation	A	B
C2	6 Patients	2 Patient
C3	14 Patients	16 Patients
C4	15Patients	20 Patients
C5	5 Patient	2 Patients

GSV Diameter in group A&B

Vein	A	B
GSV	Range: 4-12 mm X: 0.95+0.05 mm	Range: 5-14 mm X: 0.96+0.07 mm

Pre & post operative lower regional limb diameters

	Groups		Test of Significance		
	Standard Mean ± SD N (%)	Crossectomy Mean ± SD N (%)	Value	p-Value	Significance
Preoperative circumference of the leg	36.6 ± 7.45	35.68 ± 7.53	t= 0.552	0.582	NS
Post-operative circumference of the leg	33.25 ± 7.42	33.3 ± 7.37	t= 0.475	0.467	S
Preoperative circumference of the thigh	48.15 ± 8.84	47.35 ± 9.33	t= 0.886	0.378	NS
Post-operative circumference of the thigh	43.98 ± 8.49	43.5 ± 9.29	t= 0.441	0.461	S

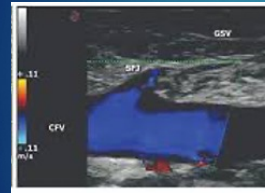
Time to Return to work (in days)

Time to Return to work (in days)	1.00	4 (5%)
	2.00	47 (58.75%)
	3.00	29 (36.25%)

Complications

Ecchymosis (Immediate post -op)	No	48 (60%)
	Yes	32 (40%)
STP (immediate post-op)	2 patients	2.5 (%)
Infection	0	0
Recurrence after 2 years	6 patients	6/80 (7.5%)

Recurrence



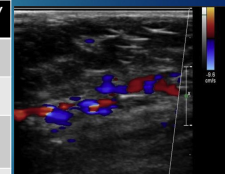
► Immediate absence of reflux at the SFJ was observed in all patient.

Recurrence

Time	Group A	Group B
Immediate	Zero	Zero
One week	Zero	Zero
6 month	One Patient	Zero
One year	4 Patients	One Patients
2 years	5 patients	One Patient

Causes of Recurrence

Cause of recurrence	Standard technique	Crossectomy technique
neovascularization	2 patients (5%)	0
Incompetent tributaries	one patients (2.5%)	0
Incompetent Anterior saphenous vein recanalization	2 patients (5%)	
	One patients (2.5%)	One patients



VCSS

	Groups		Test of Significance		
	Standard Mean ± SD N (%)	Crossectomy Mean ± SD N (%)	Value	p-Value	Significance
Preoperative VCSS	6.7 ± 1.29	6.43 ± 1.17	t= 0.999	0.321	S
Post-operative VCSS (18 M postop)	1.53 ± 0.82	1.33 ± 0.8	t= 1.109	0.271	S

Post- operative Pain

immediate post operative pain	No	9 (22.5%)	7 (17.5%)	χ ² = 0.123	0.368	NS
	Mild	21 (52.5%)	27 (67.5%)			
	Moderate	10 (25%)	6 (15%)			
pain 1 week after	No	25 (62.5%)	34 (85%)	χ ² = 5.861	0.051	NS
	Mild	13 (32.5%)	6 (15%)			
	Moderate	2 (5%)	0 (0%)			

Conclusion

- ▶ Crossectomy (ablation at 0 cm at SFJ) showed better results with less recurrence rate of varicose veins due to neovascularization or tributaries left; than the standard technique of endovenous laser ablation of varicose veins (1/12- 2 CM from SFJ) and won't allow thermal propagation into the deep venous system nor venous thrombosis without difference in complication rates .

- ▶ **And this is why GSV CROSSECTOMY Is Preferable in EVLA**



Thank you