Table XII . EVLA Variants
27 Articles, 24 RCTs
Reference underlined in color means same RCT

Operative procedure	Reference	Summary
EVLA with different wavelengths	Kabnick LS, Outcome of different endovenous laser wavelengths for great saphenous vein ablation. *J Vasc Surg*. 2006;43:88-93.	Monocenter study Primary incompetence of GSV in 51 patients. No data on SSV deep vein and CEAP clinical class Group I (n=30 lower limbs): 810-nm diode laser *versus* Group II (n=30 lower limbs): 980 nm diode laser, both bare fiber, continuous withdrawal, tumescent anesthesia **Results at 4 weeks of follow-up***:* Both laser wavelengths were effective in treating GSV insufficiency, with no major complications and a paucity of adverse outcomes
HL+ EVLA *versus* EVLA without HL	Disselhoff BC, der Kinderen DJ, Kelder JC, Moll FL. Randomized clinical trial comparing endovenous laser ablation of the great saphenous vein with and without ligation of the saphenofemoral junction: 2-year results. *Eur J Vasc Endovasc Surg*. 2008;36:713-18.	Muti-center study Bilateral GSV primary incompetence in 43 patients (86 lower limbs). No data on SSV, absence of deep vein anomaly, CEAP clinical class C2 Group I (n=43) HL+ EVLA on one lower limb *versus* Group II (n=43) EVLA without HL on the other lower limb 810-nm diode laser, bare fiber, continuous laser withdrawal Anesthesia: general (day case procedure) or local (outpatient procedure) **Results at 2 years of follow-up:** No difference between groups in terms of groin recurrence and VCSS improvement

EVLA GSV ablation AK versus GSV ablation AK+BK	Theivacumar NS, Dellagrammmaticas D, Mavor AID, Gough MJ. Endovenous laser ablation: does standard above-knee great saphenous vein ablation provide optimum results in patients with above-and below-knee reflux. A randomized controlled trial. J Vasc Surg. 2008;48:173-8.	Monocenter study 68 lower limbs with GSV primary incompetence with SFJ incompetence No SSV reflux, no data on deep vein CEAP clinical classification C2-C6 All patients were treated by EVLA, 810-nm diode laser, bare fiber, stepwise laser withdrawal AK and BK GSV reflux and BK VV and randomized in 3 groups Group I (n=23): AK-EVLA *versus* Group II (n=23): AK+BK EVLA *versus* Group III (n=22): AK-EVLA+BK FS Local tumescent anesthesia for all groups **Results at 6 weeks of follow-up** . AVVSS: improved similarly in the 3 groups· . Complementary sclerotherapy: Group I:61%; group II:17%; group III:36%· BK-EVLA was not associated with saphenous nerve injury.
EVLA with postoperative compression eccentric or not in complement of stocking	Lugli.M, Cogo A, Guerzoni S, Petti A, Maleti O. Effects of eccentric compression by a crossed-tape technique after endovenous laser ablation of the great saphenous vein: a randomized study. *Phlebology*. 2009;4:151-156. PMID: 19620697	Monocenter study 200 consecutive patients were treated by EVLA ablation for primary GSV insufficiency. No data on SSV and deep vein. CEAP clinical class C2-C6 Baseline characteristics similar for both groups They were randomized to receive (group A: 100) or not (group B: 100) an eccentric compression applied in the medial aspect of the thigh after EVLA procedure on the GSV without complementary phlebectomy. A 35-mmHg elastic stocking was applied to all treated limbs of both groups. Patients were assessed for a seven-day examination to identify the level of pain experienced by using a visual analogue scale (0 to 10). **Results**

		The intensity of postoperative pain was significantly reduced in the eccentric compression group as compared with the non-compression one. P < 0.001
EVLA with and without nitroglycerin	Hogue RS, Schul MW, Dando CF, Erdman BE. The effect of nitroglycerin ointment on great saphenous vein targeted venous access size diameter with endovenous laser treatment. *Phlebology*. 2008;23:222-26.	Multi-center study GSV primary incompetence. No data on SSV deep vein and CEAP clinical class. No previous surgery on GSV 75 patients treated by EVLA. Group I (n= 26): treadmill ambulation only Group II (n= 27): treadmill nitroglycerin (NTG) ointment Group III (n= 22): treadmill NTG ointment + treadmill ambulation **GSV diameter measurement at vein access before treatment:** · Group I diameter increase: +2.7%. P=NS · Group II diameter increase: +51.7%. P<0.0001 · Group III diameter increase +69%. P<0.0001 **Conclusion**: pretreatment with topically applied NTG ointment (2%) produced a statistically significant venous dilatation easing targeted venous access
EVLA 980 nm bare- tip fibre *versus* EVLA 1470 nm radial fibre	Doganci S, Demirkilic U. Comparison of 980 nm Laser and Bare-tip fibre with1470 nm Laser and radial Fibre in the treatment of great Saphenous vein varicosities: A prospective randomized controlled trial. *Eur J Vasc Endovasc Surg 2010;40:254-59*	Monocenter study GSV primary incompetence in sixty patients (106 lower limbs) without SSV incompetence or deep vein anomaly. CEAP clinical class C2-C4 Intravenous sedation Group I (n= 30): EVLA 980 nm bare tip fibre + tributary phlebectomy *versus* Group II I (n= 30): EVLA 1470 nm radial fibre + tributary phlebectomy **Results at 1-6 months of follow-up:** Less post-operative pain (P<0.05) and better VCSS scores in group II compared with group I.
EVLA 1470nm warm *versus* cold tumescence anesthesia	Pannier F, Rabe E, Maurins U. 1470 nm diode laser for endovenous ablation (EVLA) of incompetent saphenous veins – a prospective randomized pilot study	Multi-center study GSV primary incompetence in 85 lower limbs. No data on SSV. No deep vein thrombosis. CEAP clinical class C2-C6 Group I (n=42): warm tumescence anesthesia = 37 C° *versus*

	comparing warm and cold tumescence anesthesia. *Vasa*. 2010;39:249-55.	Group II (n=43): cold tumescence anesthesia = 5 C° **Results at 1 month of follow-up:** · No difference between groups in terms of occlusion · Postoperative pain reduction in group II Significant reduction of analgesic intake in group II
	Dumantepe M, Uyar I. Comparing cold and warm tumescent anesthesia for pain perception during and after the endovenous ablation procedure with 1470nm diode laser. *Phlebology*. 2015;30:45- 51.	Multi-center study GSV primary incompetence in 101 patients. No data on SSV and deep vein. CEAP clinical class C2-C6 Group I (n=51): warm tumescence anesthesia = 24 C° *versus* Group II (n=50): cold tumescence anesthesia = 8 C° **Results at 1 week of follow-up:** · No difference between groups in terms of occlusion (100%) · Pain intensity on VAS: 3 in group I and 1 in group II · Significant reduction of analgesic intake in group II. P<0.05 Significant reduction of side effects in group II. P<0.001
EVLA 980 nm *versus* EVLA 1500nm	Vuylsteke M, De Bo H,Dompe G, Di Crisci D, Abbad, CM, Mordon S. Endovenous laser treatment: is there a clinical difference between using a1500 nm and a 980 nm diode laser ? A multicenter randomised clinical trial. *Intern Angiology* 2011;30:327-34.	Multi-center study GSV primary incompetence in 180 lower limbs. without SSV incompetence or deep vein anomaly. CEAP clinical class C2-C6 Local tumescent anesthesia Group I (n= 90): EVLA 980 nm bare tip fibre *versus* Group II (n= 90): EVLA 1500 nm bare tip fibre Analyzed; group I n=88; group II n=87 **Post-operative results:** · Less induration in group II (1500 nm) compared with group I. P=0.0002 · Less analgesics intake in group II (1500 nm) compared with group I · Better HRQoL (CIVIQ) in group II (1500 nm) compared with group I.P=0.018 **Results at 6 months of follow-up:**

		No difference between groups in terms of occlusion
HL+ EVLA *versus* EVLA without HL	Disselhoff BC, der Kinderen DJ, Kelder JC, Moll FL. Five-year results of a randomised clinical trial of endovenous laser ablation of the great saphenous vein with and without ligation of the saphenofemoral junction. *Eur J Vasc Endovasc Surg*. 2011;41;685-90.	Multi-center study Bilateral GSV primary incompetence in 43 patients (86 lower limbs). No data on SSV, absence of deep vein anomaly, CEAP clinical class C2 Group I (n=43) HL+EVLA on one lower limb *versus* Group II (n=43) EVLA without HL on the other lower limb 810-nm diode laser, bare fiber, continuous laser withdrawal used in both groups Anesthesia: general (day case procedure) or local (outpatient procedure) **Results at 5 years of follow-up:** . Groin recurrence: 65%in group I, 79%in group II. P=0.36 . Global recurrence and VCSS: no difference between the 2 groups
EVLA Bare Fibre *versus* Tulip Fibre	Vuylsteke M, Thomis S, Mahieu P, Mordon S, Fourneau I. Endovenous laser ablation of the great saphenous vein using a bare fibre *versus* a tulip fibre : a randomised clinical trial. *Eur J Vasc Endovasc Surg*. 2012;44:587-92.	Muti-center study GSV primary incompetence in 174 patients without SSV incompetence or deep vein anomaly. CEAP clinical class C2-C6 Local tumescent anesthesia +/- general anesthesia Group I (n=87): EVLA 1470nm diode bare fiber *versus* Group II (n=87): bare fiber +Tulip fibre Complementary phlebectomy in both groups **Post-operative results:** · Less postoperative ecchymosis in group II (Tulip fibre) compared with group I (P<0.001). · Less postoperative pain in group II (Tulip fibre) compared with group I. P<0.001. · Better HRQoL in group II (Tulip fibre) compared with group I. P=0.0023. But no difference between groups in terms of analgesic intake or patient satisfaction

		Results at 1 year of follow-up: No difference between groups in terms of obliteration rate
EVLA 2 days post operative compression *versus* 7 days	Bakker NA, Schieven LW, Bruins RMG, van den Berg M Hissink RJ. Compression Stockings after Endovenous Laser Ablation of the Great Saphenous Vein: A Prospective Randomized Controlled Trial. *Eur. J Vasc Endovasc Surg*. 2013;46:588-91.	Muti-center study 109 symptomatic patients with incompetent GSV. No data on SSV, absence of deep vein anomaly, CEAP clinical class C2-C5 Local tumescent anesthesia Group I (n=37): EVLA 810 nm bare-tip fibre + 2 days of postoperative compression therapy (stockings, 35 mm Hg at ankle) *versus* Group II (n=32): EVLA 810 nm bare-tip fibre + 7 days of postoperative compression therapy (stockings, 35 mm Hg at ankle) **Results at 48 hours to 12 weeks of follow-up:** · *Intensity of symptoms on VAS at week 1*: better pain reduction in group II compared with group I · *HRQoL (SF36) at week 1*: better improvement · *Vein obliteration:* 100 % in both groups neither *DVT:* no occurrence of DVT in neither group
EVLA 12 W intermittent laser withdrawal *versus* 14W continuous laser withdrawal	Samuel N, Wallace T, Carradice D, Mazari F AK, Chetter C. Comparison of 12-W *versus* 14-W Endovenous laser ablation in the treatment of great saphenous varicose veins: 5- Year outcomes from a randomized controlled trial. *Vascular and Endovascular Surgery*. 2013;47:346-52.	Monocenter study Primary Incompetent SFJ, reflux in GSV 76 patients. No data on SSV, absence of deep vein anomaly, CEAP clinical class C2-C5 Local tumescent anesthesia Group I (n=38): laser 810-nm bare fiber; laser power 12 W with 1-second laser pulses at 1-second intervals between pulse *versus* Group II (n=38): laser 810-nm bare fiber; laser power 14 W continuous withdrawal 2mm/s. Concomitant phlebectomy and/or Perforator ligation in both groups. **Results at 1 week-5 years of follow-up:** Significant improvement in both groups in VCSS, pain scores, AVQQ scores, HRQol scores (SF-36 EQ-5D) compared to preoperative status P>0.05 **Results at 5 years of follow-up:** Better long-term occlusion
Classic open surgery	Flessenkämper I, Hartmann M,	Multi-center study.

versus EVLA variants for for GSV or SSV incompetence	Stenger D, Roll S. Endovenous laser ablation with and without high ligation compared with high ligation and stripping in the treatment of great saphenous varicose veins: initial results of a multicentre randomized controlled trial. *Phlebology*. 2013;28:16-23.	Patients with primary GSV incompetence + incompetent SFJ. No data on SSV and deep venous system CEAP clinical classification C2-6 All procedures were performed under general, peridural or spinal anesthesia Group I (n=59): HL+ Stripping Group II (n=142): EVLA Group III (n=148): EVLA+HL Diode 980-nm diode laser, bare fiber, continuous mode in groups II and III. All procedures were performed under general, peridural or spinal anesthesia **Results at day 1 after operation:** · *Post-operative pain* was higher in group III compared with groups I and II. P=0.0069 **Results at 2 months of follow-up:** · *VCSS scores:* no difference between groups · *Presence of inguinal reflux in GSV:* Group I=0; Group II = 26.7%; Group III=6.7% Group I versus group II. P<0.0001 Group I versus group III. P< 0009 Group II versus group III. P<0.0001
EVLA 940 nm *versus* EVLA 1470 nm	Malskat WSJ, Giang G, De Maeseneer MGR, Nijsten TEC, van der Bos RR. Randomized clinical trial of 940- versus 1470-nm endovenous laser ablation for great saphenous vein incompetence. *Br J Surg.* 2015. **DOI:** 10.1002/bjs.10035	Monocenter study 142 patients with primary symptomatic GSV incompetence with a diameter at least 5mm. Exclusion criteria; Acute DVT, PTS, vascular malformation. No data on SSV, deep reflux or CEAP clinical class. All patients treated by EVLA in an outpatient setting. Local tumescent anesthesia Tulip-tip fibre and concomitant phlebectomy Group I (n=70): laser 940-nm *versus* Group II (n=72): laser 1470-nm **Results at 1-52 weeks of follow-up:** *-Pain score at 1week* (VAS) Less pain in group II (*P*=0.0004) *-Duration of analgesia*

		Shorter in group II. P=0.037 . *Post-operative complications* Same in both groups except for superficial thrombophlebitis that was higher in group II. P=0.05 . *HRQol and VCSS at 12 weeks* No difference between the 2 groups . *Vein occlusion at 52 weeks* No difference between the 2 groups
EVLA 980 nm bare-Tip fiber versus EVLA 1470 nm Radial 2ring	Hirokawa, M, Ogawa T, PhD, Sugawara H, Shokoku S, and Sato S. Comparison of 1470 nm Laser and Radial 2ring Fiber with 980 nm Laser and Bare-Tip Fiber in Endovenous Laser Ablation of Saphenous Varicose Veins: A Multicenter, Prospective, Randomized, Non-Blind Study. Ann Vasc Dis. 2015;8:282-289.	Multi-center study 113 patients (113 LL) with primary GSV or SSV incompetence CEAP C2-C4a. No PTS Group I (n=56): laser 980-nm bare type fiber *versus* Group II (n= 57): laser 1470-nm Radial 2ring. In both groups: □ local tumescent anesthesia Postoperative compression **Results at 1 day- 12 weeks of follow-up** - Occlusion rates at 12 weeks were 100% in both groups. - Rates of pain (0% vs. 25.0%) and bruising (7.0% vs. 57.1%) were significantly lower in Group II. P <0.0001. - VAS of pain was significantly lower on postoperative day 1, day 5 and 2nd week in Group II.
EVLA with tumescent anesthesia Bupivacaine vs Lidocaine versus Prilocaine	Gunes T, Altin F,Kutas B, Aydin S, Erkoc K, Eygi B et al. Less painful tumescent solution undergoing endovenous laser ablation of the saphenous vein. Ann of Vasc Surg 2015;29:1123-27	Multi-center study 90 patients with primary incompetence of GSV. No data on SSV, absence of deep vein anomaly, no data on CEAP clinical class All patients treated by EVLA+ tributary phlebectomy under local anesthesia Group I (n=30): Lidocaine Group II (n=30): Prilocaine Group III (n=30): Bupivacaine **Results: intra operatively and 1 day post operatively pain**

		Less pain with Bupivacaine compared to others for both pain evaluation P<0.0001
EVLA 1470-nm versus EVLA 1920-nm	Mendes-Pinto D, Bastianetto P, Cavalcanti Braga Lyra L, Kikuchi R, Kabnick L. Endovenous laser ablation of the great saphenous vein Comparing 1920-nm and 1470-nm diode laser. Int Angiology 2016.;35:599-604	Multi-center study 67 patients (90 extremities) with primary incompetence of GSV. No data on SSV, absence of deep vein anomaly, no data on CEAP clinical class Spinal and local tumescent anesthesia Group I (n= 42 extremities) EVLA 1470-nm. Power 10 watt. Continuous mode *versus* Group II (n= 48 extremities) EVLA 1920-nm. Power 5 watt. Continuous mode **Follow-up at 7-day, 30-day, 3-month, 6- month 1year:** **Results** Clinical evaluation= VCSS. US= measurement of occlusion length . Group II: less ecchymosis P<0.01, induration P <0.01, day analgesic use P =NS . VCSS no difference between group I and II . Closure rate lower at 1-year in group II. P=*0.05*
Classic open surgery *versus* EVLA variants for for GSV or SSV incompetence	Flessenkämper I, Hartmann M, Hartmann K, Stenger D, Roll S. Endovenous laser ablation with and without high ligation compared with high ligation and stripping for treatment of great saphenous varicose veins: Results of a multicentre randomised controlled trial with up to 6 years follow-up. *Phlebology.* 2016;31(1):23-33.	Multi-center study. Patients with primary GSV incompetence + incompetent SFJ. No data on SSV and deep venous system CEAP clinical classification C2-6 All procedures were performed under general, peridural or spinal anesthesia Group I (n=159): HL+ Stripping Group II (n=142): EVLA Group III (n=148): EVLA+HL Diode 980-nm diode laser, bare fiber, continuous mode in groups II and III. Anesthesia: unknown in group I; local tumescent anesthesia in groups II and III. **Results at 2 (74% of patients) up to 6 years of follow-up (31% of patients)** Clinical recurrence appears with the same frequency in all three treatment groups, but the responsible pathological mechanisms seem to differ.

		Group I: more recurrence at the SFJ Group II and III: more recurrence into the GSV and tributaries.
EVLA completed with delayed or concomitant phlebectomy	Carradice D, Mekako AI, Hatfield J, Chetter IC. Randomized clinical trial of concomitant or sequential phlebectomy after endovenous laser therapy for varicose veins. *Br J Surg.* 2009;96:369-375.	Monocenter study 50 patients presenting primary incompetence of GSV without SSV incompetence or deep vein anomaly. No data on CEAP clinical class All of them were treated by EVLA+ tributary phlebectomy under local anesthesia Group I (n=25): delayed phlebectomy versus *versus* Group II (n=25): concomitant phlebectomy **Follow-up at 1year:** . *Procedure duration:* longer in group II (median 65 min) compared with group I (median 45 min). *P=0.002* . *Pain scores and recovery times*: no difference between the 2 groups . *HRQoL, severity score (AVVQ, VCSS) at 6 weeks:* lower AVQQ score in group II compared to group I. *P<0.001* . *HRQoL, severity score (AVVQ, VCSS) at 12 weeks:* lower AVQQ and VCSS in group II compared to group I. *P=0.015 and P<0.001 respectively.* . At 1 year, there were no difference in VCSS or AVVQ scores. . Concomitant phlebectomy with EVLT prolonged the procedure but reduced the need for secondary procedures.
	El-Sheika J, Nandrah S, Carradice D, Wallace T, Samuel N, Smith GE et al. Clinical outcomes and quality of life 5 years after a randomized trial of concomitant or sequential phlebectomy following endovenous laser ablation for varicose veins. *Br J Surg.* 2014;101:1093-1097.	Monocenter study 50 patients presenting primary incompetence of GSV without SSV incompetence or deep vein anomaly. No data on CEAP clinical class All of them were treated by EVLA+ tributary phlebectomy under local anesthesia Group I (n=25): delayed phlebectomy *versus* Group II (n=25): concomitant phlebectomy **Results at 1 to 5 years of follow-up:**

		· *HRQoL severity score (AVVQ, VCSS*): were equivalent at 1 year in both groups · *Secondary procedure at 1 year:* rate of redo surgery equivalent between group I=3 and group II=4. *Secondary procedure at 5 years:* group I= 19/23, and group II=7/25. (P<0.001
EVLA in patients with and without compression	Elderman JH, Kraznai AG, Voogd AC,Hulsewé KWE, Sikking CJMM. Role of compression stockings after endovenous laser therapy for primary varicosis .J Vasc Surg: Venous and Lym 2014;2:289-96	Muti-center study 79 patients with primary incompetence of GSV with incompetence of the SFJ. CEAP clinical class C2S-C4S No data on SSV, absence of deep vein anomaly. Criteria exclusion: Previous DVT VV surgery All of them were treated by HL +EVLA 810 nm continuous withdrawal Elastic bandage on the operating table left for one day Group I (n=39): No compression *versus* Group II (n=40) high elastic compression, class II worn12.48 hourd/day **Follow-up 6 weeks** **-** Less postoperative pain in group II until day 14. P=0.017- 0.067 - Less analgesic in group II. P=0.004 - No significant differences were found regarding time to return to work, Aberdeen Varicose Vein Questionnaire scores, RAND 36-Item Health Survey scores, leg circumference measurements, and risk of complications.
EVLA in patients with and without compression	Ye K, Wang R, Qin J, Yang X, Yin M, Liu X, Jiang M. Post-operative Benefit of Compression Therapy after Endovenous Laser Ablation for Uncomplicated Varicose Veins: A Randomized Clinical Trial EJVES 2016;52, (6) :847–853	Monocenter study 400 patients with primary incompetence of GSV. No data on SSV, absence of deep vein anomaly. CEAP clinical class C2. All of them were treated by HL +EVLA 810 nm continuous withdrawal for GSV+ laser ablation of tributary by multiple punctures. Elastic bandage on the operating table left for one night Group I (n=200): No compression

	DOI: http://dx.doi.org/10.1016/j.ejvs.2016.09.005	*versus* Group II (n=200) high elastic compression, 23-32 mmHg at ankle for 2 weeks. **Follow-up 2 weeks** *First week* Group II less pain P<0.001 less edema P=0.01 *After one week* No difference in terms of HRQoL and mean time to return to work
	Ayo A, Blumberg SN, Rockman CR, Sadek M, Caine N, Ademann M et al. Compression versus no Compression after Endovenous Ablation of the Great Saphenous Vein: A Randomized Controlled Trial. Ann Vasc Surg 2017; 38: 72–77	Monocenter study 70 patients presenting primary GSV varices, no data on SSV, no history of deep vein thrombosis CEAP classification class C2-C6. They were treated by EVT without complementary phlebectomy: EVLA 890nm, 7 W for a total of 60-80 J/cm delivery. were divided into 2 groups Group I (n=46): no compression except 24 hr. of post-procedure bandage *versus* Group II (n=39): Thigh – high 30-40-mm Hg compression 24 hr. after the procedure for 7 days. Baseline characteristics similar for both groups **Results assessed at 1 and 7 day.** There was no significant difference in patient-reported outcomes of postprocedural pain scores estimated by CIVIQ-2 and VCSS

EVLA or RFA + tributary phlebectomy with buffered local tumescent anesthesia (LTA) vs non-buffered LTA	Nandrah S, Wallace T, El-Sheika J, Leung C, Carradice D, Chthesia during tter I. A Randomised clinical trial of buffered tumescent local anesthesia during endothermal ablation for superficial venous incompetence EJVES 2018,56:699-708	Monocenter study 97 patients presenting primary GSV incompetence. No SSV incompetence, no deep vein anomaly They were treated by EVLA with concomitant phlebectomy. CEAP clinical classification C2-C6. All patients treated by EVLA or RFA +tributary phlebectomy Group I (n= 47) buffered tumescent anesthesia *versus* Group II (n= 50) non-buffered tumescent anesthesia **Follow-up assessment at 1, 6 and 12 weeks** *-Peri-procedural pain score measured by VAS.* Best result in Group I. P= 0.001 *-Pain score and analgesic use in the subsequent week same in both groups* Best result in Group I. P=0.008. -No difference in terms of VQQ, SF36, and EQ-5D scores between the 2 groups **Conclusion** Buffered local tumescent anesthesia provides better results
EVLA for varices with and without perioperative administration of MPFF	Stoiko YuM, Mazaishvili KV, Khlevtova TV, Tsyplyashchuk AV, Kharitonova SE, Akimov SS. Effect of pharmacotherapy on course of postoperative period after endovenous Thermal ablation. angiol Sosud khir 2015	Monocenter study 60 patients presenting primary VV of the GSV C2S Ep P r were treated by EVLA or RFA. Group I (n 30) MPFF 7 days after operative treatment *versus* Group II (n 30) No venoactive drugs **Results** By using both CIVIQ and VCSS *Group I* - pain reduction. P<0.05 - faster restoration of motor activity
Endovenous surgery for varices with and without	Bogachev V, Yu, Boldin BV, Turkin Pu. Perioperative administration of	Monocenter study. 1519 patients with primary GSV or SSV

perioperative administration of MPFF	micronized purified flavonoid in endovascular treatment of varicose disease. Angio Sosud Khir 2019;25: 89-95.	were treated by endovascular thermal ablation (EVLA or RFA) Clinical class C2 Group I (n 1039): MPFF 1000mg/daily in the perioperative period *versus* Group II (n 400) no venoactive treatment **Results** Less adverse events in Group I: compared to Group II: Ecchymosis 7.1 vs 11%. P=0.01 Hematoma 0.5 vs 1.3%. P=0.1 Paresthesia 0.5 vs 1.7 %. P=0.02 Thrombophlebitis 0.2 vs 0.6 %. P=0.2 Pigmentation 0.6 vs 3.3 %. P=0.001 Heat -induced thrombosis 0.3 vs 1.3%. P=0.02

Abbreviations:

AK= above knee; AVVQ= Aberdeen varicose vein questionnaire; AVVSS= Aberdeen varicose vein severity score ;BK= below knee; BK-FS= below knee foam sclerotherapy; CIVIQ-2= Chronic Venous Insufficiency Questionnaire; DVT=deep venous thrombosis ;EQ-5D Euroqol; EVLA= endovenous laser ablation; EVT=endovenous thermal ablation; GSV =great saphenous vein; HL= High ligation; HRQoL=health-related quality of life; NTG, nitroglycerin; PTS =postthrombotic syndrome; RFA= radiofrequency ablation; SFJ=saphenofemoral junction; SF-36= short form 36 items ;SSV=small saphenous veins; US=ultrasound ;VAS= Visual analogic Scale; VCSS= venous clinical severity score ;VV= varicose veins W=watt.