



Title	Early single-centre comparative results on non-thermal ablation of symptomatic incompetent great saphenous veins (GSV): cyanoacrylate glue (VenaSeal) versus mechanicochemical ablation (ClariVein)
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Early Single-centre Comparative Results on
Non-thermal Ablation of Symptomatic
Incompetent Great Saphenous Veins (GSV):
Cyanoacrylate Glue (VenaSeal)
versus
Mechanicochemical ablation (ClariVein)

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Disclosure

Speaker name:

.....Yuk LAW.....

I have the following potential conflicts of interest to report:

- Trip sponsorship by IntegMed Ltd

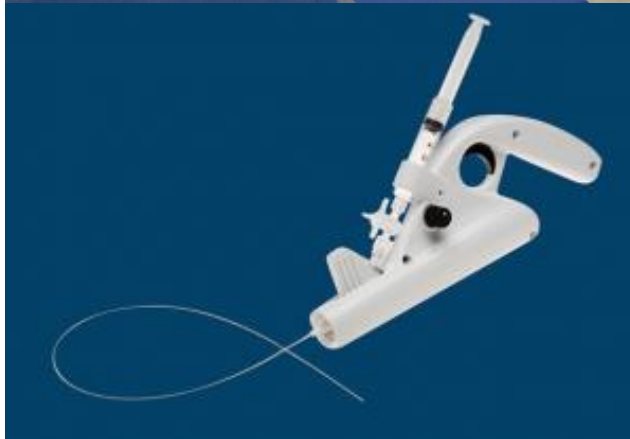
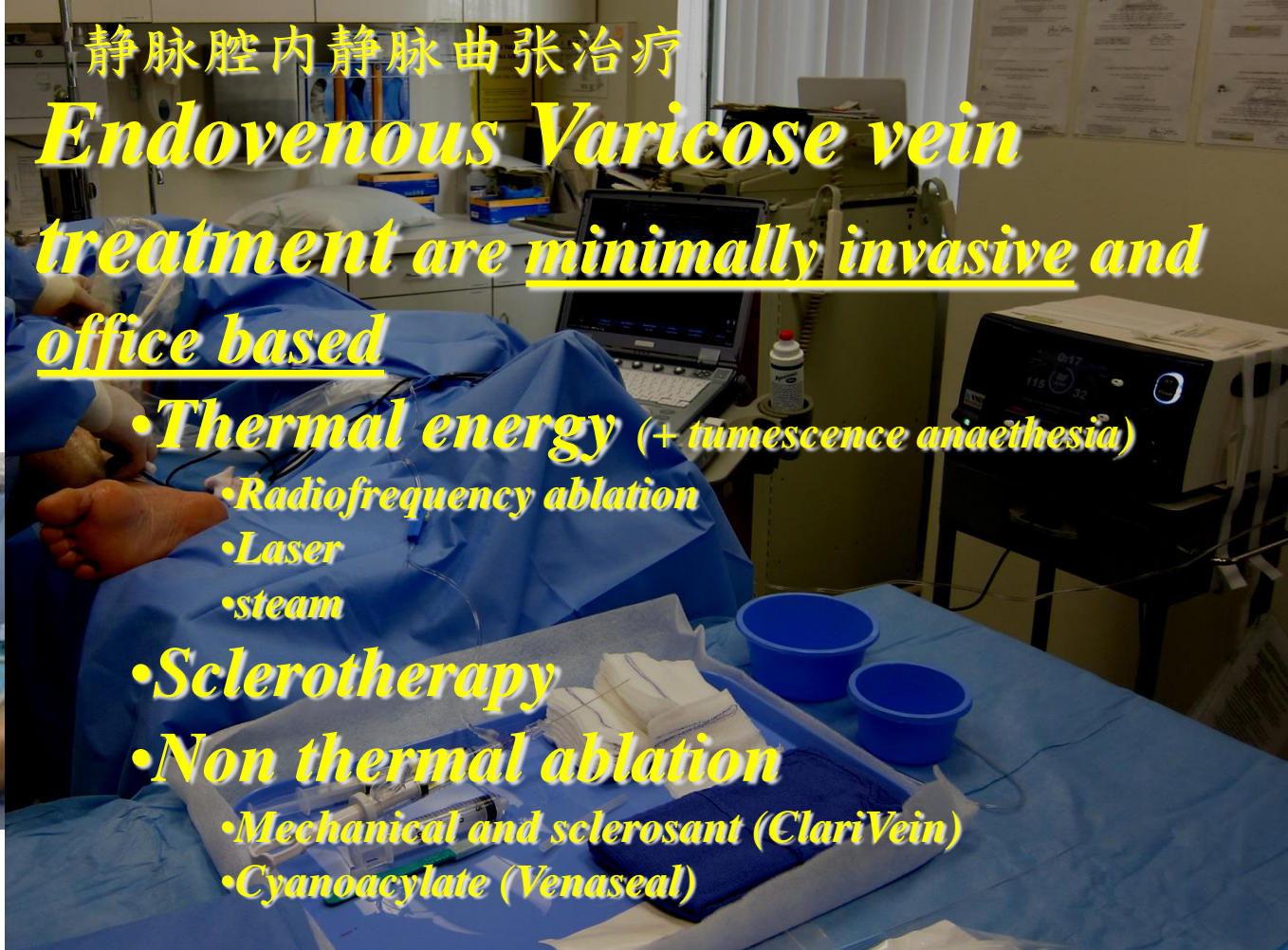
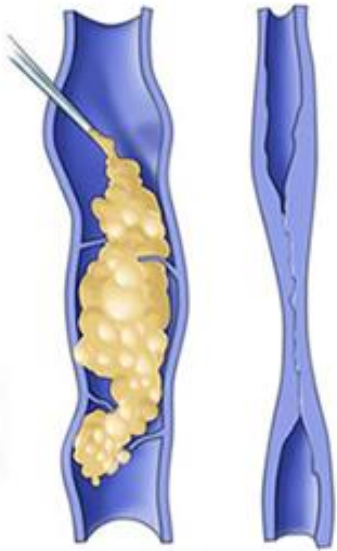
I do not have any potential conflict of interest

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

静脉腔内静脉曲张治疗

Endovenous Varicose vein treatment are minimally invasive and office based

- **Thermal energy** (+ tumescence anaesthesia)
 - Radiofrequency ablation
 - Laser
 - steam
- **Sclerotherapy**
- **Non thermal ablation**
 - Mechanical and sclerosant (ClariVein)
 - Cyanoacrylate (Venaseal)



Cyanoacrylate Glue (VenaSeal)



After successful cannulation of the GSV, a guidewire is passed under ultrasound guidance. In the meantime, the cyanoacrylate is being drawn up and prepared.

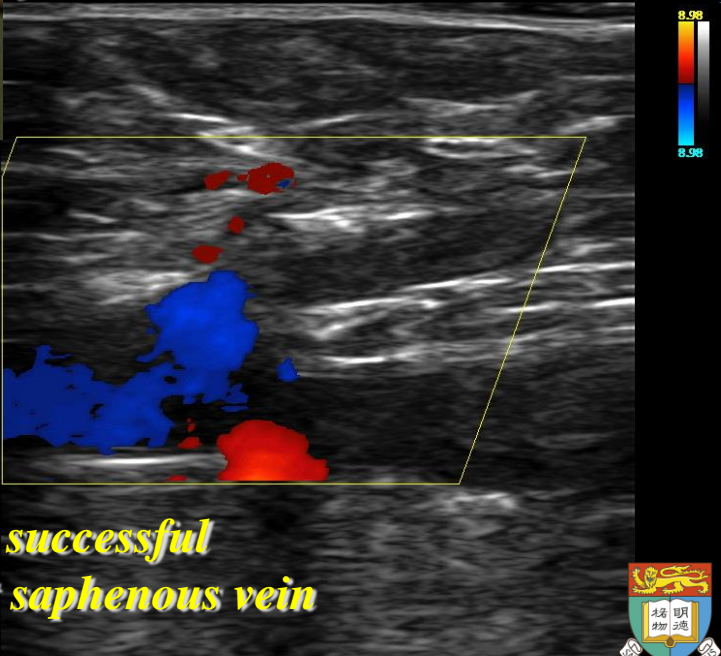


Mechanicochemical ablation (ClariVein)





Completion duplex: absence of thrombus or clots in deep femoral vein

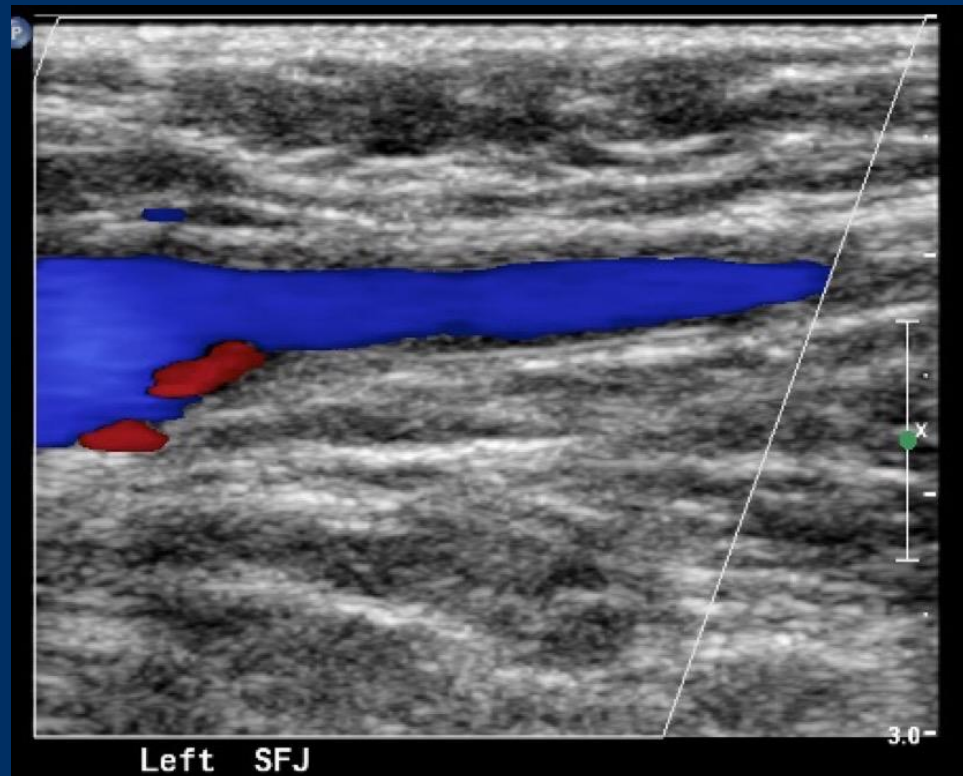


Completion duplex: successful obliteration of great saphenous vein



Methods

- Single center prospective, non randomized comparative study for evaluation of safety and efficacy of VenaSeal v.s. Clarivein
- Primary outcomes:
 - Complications
 - Clinical recurrence of varicosity and re-intervention
 - Radiological duplex ultrasound GSV obliteration rate: 4 days, 1 week, 1 month, 3 months, 6 months



Patients' characteristics

VenaSeal group: 43 legs in 22 patients

ClariVein group: 30 legs in 18 patients

	VenaSeal (n=22)	ClariVein (n=24)	P value
Median age	62 (range 39-80)	60.5 (range 44-76)	NS*
Male: Female	6:16	8:16	NS^
Co-morbidities			
- DM	2/22	0/24	NS^
- HT	9/22	4/24	NS^
- Cardiac	6/22	2/24	NS^
- Renal	1/22	0/24	NS^
- COPD	0/22	0/24	NS^
Sides			
- Unilateral	1/22	18/24	<0.001^
- Bilateral	21/22	6/24	

*Student t test, ^chi square test

Leg varicose vein characteristics

	VenaSeal (n=43)	ClariVein (n=30)	P value
CEAP clinical classification	28	15	NS [^]
- C3	12	9	
- C4a	1	3	
- C4b	1	0	
- C5	1	3	
- C6			
Mean diameter of GSV (mm)	7.2 (range 3.9-11.4)	6.5 (range 5.0-10.0)	NS*
Mean treatment length of GSV (cm)	28.4 (range 20-33)	32.8 (range 25-38)	0.001*

*Student t test, [^]chi square test

Operative outcomes

	VenaSeal (n=43)	ClariVein (n=30)	P value
Mean operative time (minutes)	64.6 (range 28-99)	72.0 (range 25-125)	NS*
Primary success	43/43 (100%)	29/30 (96.7%)	NS^
Access			
- Percutaneous	43/43 (100%)	27/30 (90%)	NS^
- Open	0/43	3/30	

*Student t test, ^chi square test

One procedure failure for ClariVein group due to very tortuous GSV; and hence excluded from subsequent analysis

Post-operative complications

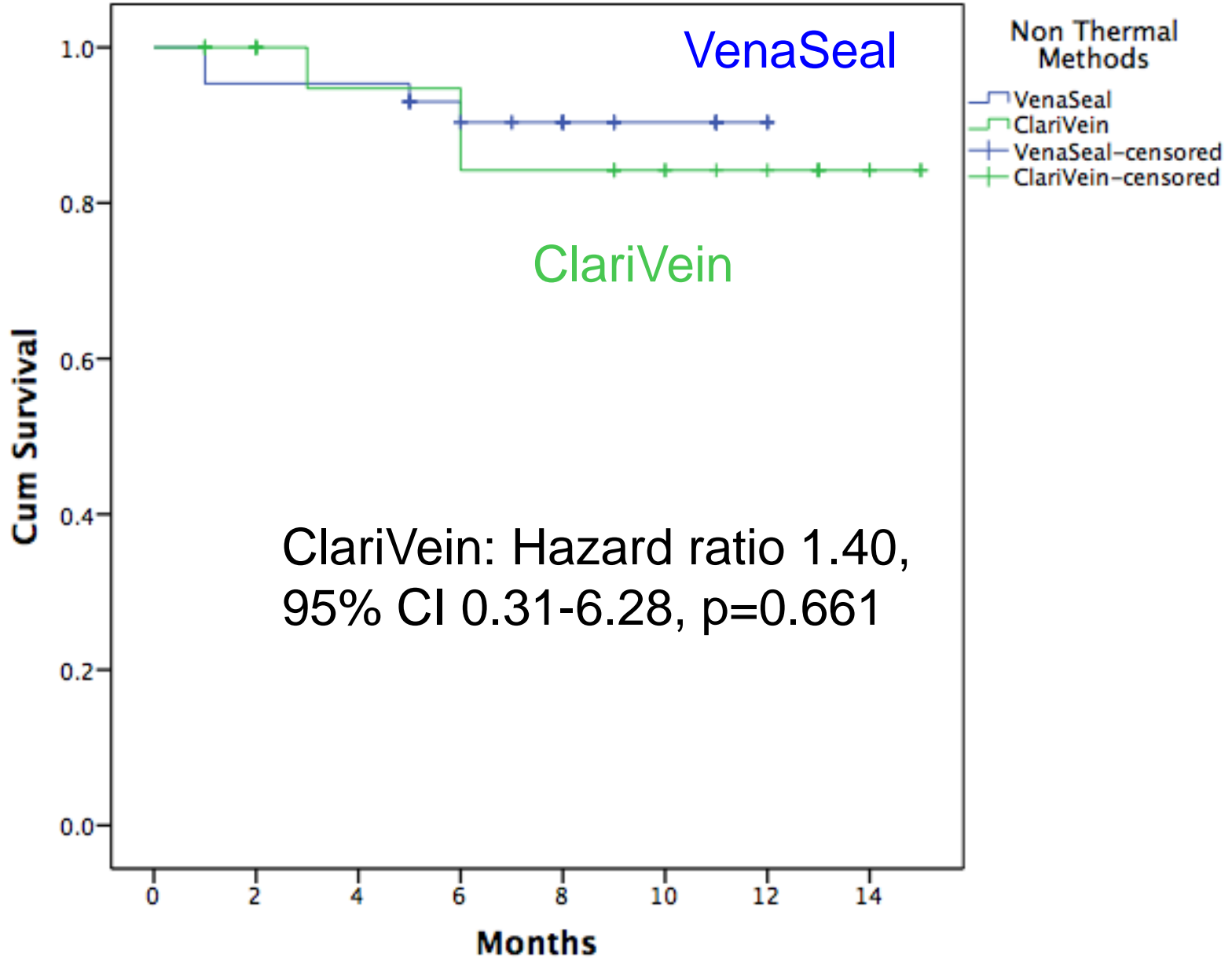
	VenaSeal (n=43)	ClariVein (n=29)	
Deep Vein thrombosis	0	0	NS [^]
Thrombus extension to deep vein	0	3	NS [^]
Parenthesis	1	0	NS [^]
Weakness	0	0	NS [^]
Wound infection	1	0	NS [^]
Cellulitis	0	1	NS [^]
Symptomatic thrombophlebitis	0	2	NS [^]

[^]chi square test

Clinical outcomes

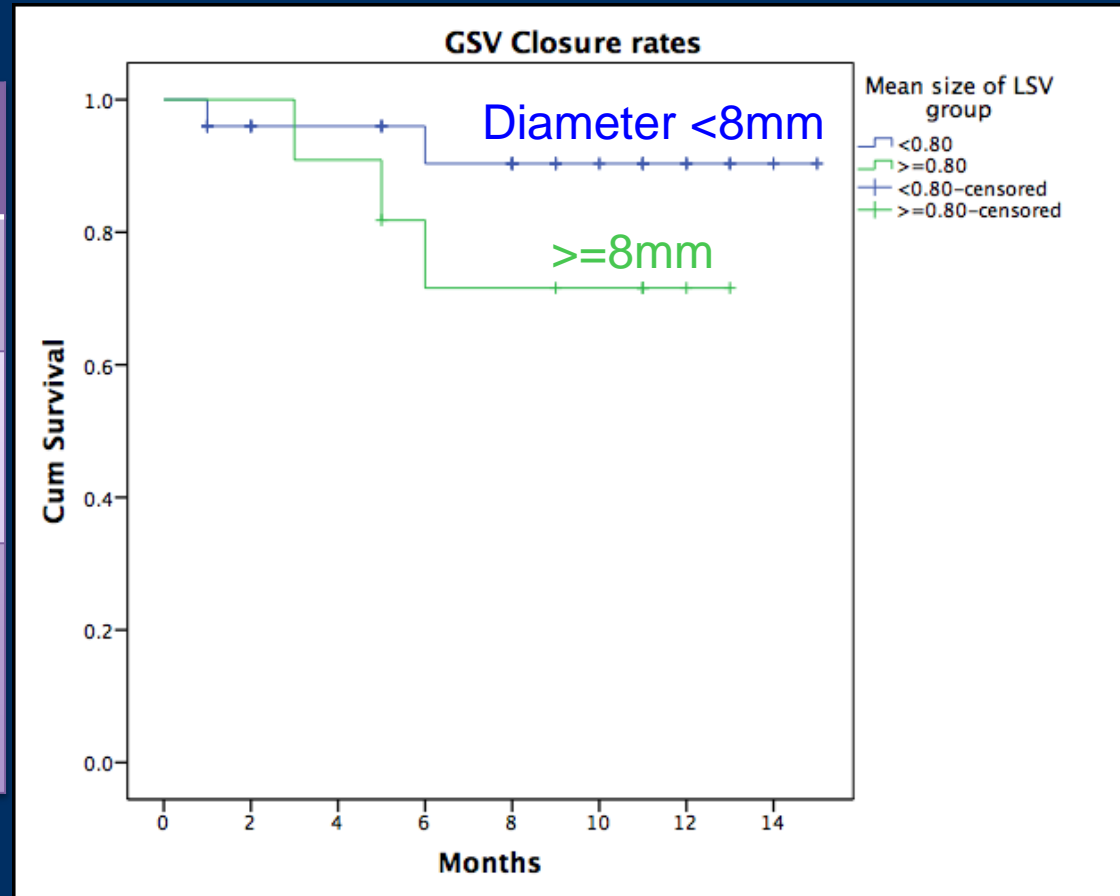
- VenaSeal group: median follow up period 9 months (range 5-12)
- ClariVein group: median follow up period 9.5 months (range 1-15)
- No clinical recurrence or secondary intervention

GSV Closure rates



Predictors of recanalization

	Hazard ratio	95% CI	P value
ClariVein	1.40	0.31-6.28	0.661
Mean diameter $\geq 8\text{mm}$	3.10	0.69-13.89	0.139
Mean treatment length $<20\text{cm}$	3.05	0.53-17.62	0.212



Conclusion

- Both treatment modalities were safe with comparable clinical and radiological outcomes
- Trend towards more recanalization in GSV with larger diameter



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