



Comparison of CLaCS versus Sclerosant

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Disclosure: No Conflict of Interest

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Concentrated sugar kills cells: D75



ARTIGO ORIGINAL

Pesquisa sobre escleroterapia liquida em varizes dos membros inferiores
Survey on liquid sclerotherapy of lower limb varicose veins
 Marcondes Figueiredo, Matheus Fidelis Figueiredo

4. Qual produto você utiliza na sua escleroterapia?

Glicose 75%	35,35%
Oleato de etanolamina	8,19%
Polidocanol com glicose	14,66%
Oleato de etanolamina com glicose	12,50%

Hiroshi Miyake Doctorate PhD from University of São Paulo 1972 (in Portuguese) ~40 years -> Phlebology 2012:27:383-389



Phlebology

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Review article

Role of injection pressure, flow and sclerosant viscosity in causing cutaneous ulceration during sclerotherapy

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Abstract
 The objective of the study is to evaluate the viscosity of popular sclerosants and their flow hydrodynamics through a syringe/needle to further discuss Miyake's old, venous-capillary reflux theory using additional objective data. The following sclerosing agents were tested in the study: 75% dextrose (D75), 50% dextrose (D50%), 2% ethaolamine oleate (Eho), 1% sclerosant (Scl), and 0.5% sodium tetradecyl sulphate (STS0.5%). Using 3 ml syringes and 25G needles, the resulting pressures and flows for each sclerosant agent were measured. In all tests, a flow-rate approach was corrected between the syringe and the needle so that an arm of the stopcock could be used to increase injection pressure with a digital manometer to 1 mmHg increments. Two tests were performed: in trial 1, the syringe was attached to a Sotonic 480 infuser pump and in trial 2, the solutions were injected manually. The observed sclerosant viscosities were as follows: D75%: 0.28 Poise; D50%: 0.12 Poise; Eho: 0.10 Poise; Scl: 0.07 Poise and STS0.5%: 0.04 Poise. In trial 1 (constant flow), it was observed that D75%, which had the highest viscosity of the sclerosants tested, had the highest pressure readings. In trial 2 (constant pressure), the flow obtained with the D75% solution was lower than the flow of the other solutions. In conclusion, based on the rabbit study theory, vessel size and sclerosant viscosity and strength, not extravasation, play a role in causing ulceration from injection sclerotherapy. As a result, they all affect the potential of venous-capillary reflux being caused by sclerotherapy injection and, thus, the risk of postinjection cutaneous ulceration.

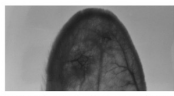


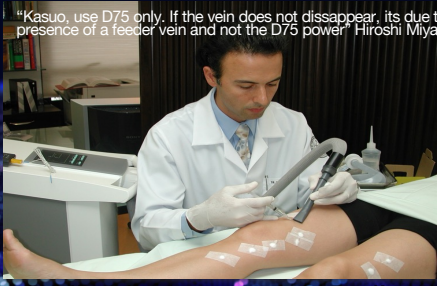
Figure 3 Intradermal injection rabbit ear: 24 hours after injection. The necrotic ulcer in various sizes in all local sites injected, except ear 19.

Table 4 Correlation between injection pressure and size and frequency of lesions


Pressure	Group A		Group B
	300	700	
1	+++	+++	+
2	++	++	+
3	++	++	+
4	++	++	+
5	++	++	+
6	++	++	+
7	++	++	+
8	++	++	+
9	++	++	+
10	++	++	+
11	++	++	+

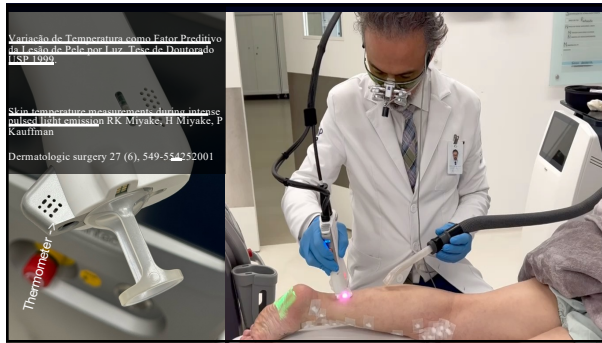
Group A: veins up to 0.4 mm in diameter. Group B: veins larger than 0.8 mm in diameter.
 Size of lesions: 1 = 0-2 mm; 2 = 2-4 mm; 3 = 4-6 mm; 4 = 6-8 mm; and 5 = 8-10 mm. All injections: distance 20% to ethaolamine 2% (preparation 10:1).

"Kasuo, use D75 only. If the vein does not disappear, its due to the presence of a feeder vein and not the D75 power" Hiroshi Miyake



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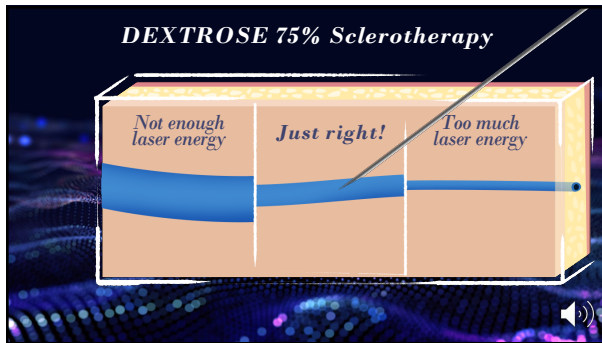
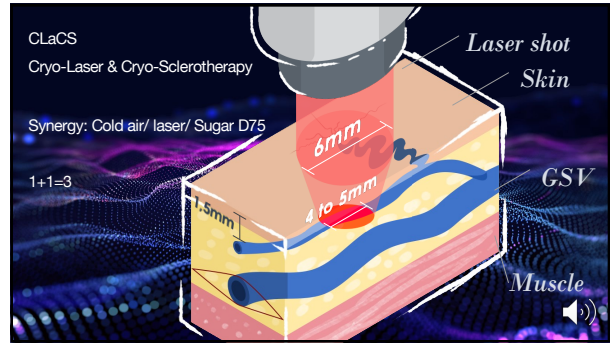




Verificação de Temperatura com Este Brachímetro
 e a Lesão de Pele por Laser de Diodo em
 1500 nm

Skin temperature measurement during
 pulsed diode laser treatment
 R.K. Miyake, H. Miyake, P.
 Knutman

Dermatologic surgery 27 (6), 549-554, 2001



ARTICLE IN PRESS

State of the art on cryo-laser cryo-sclerotherapy in lower limb venous aesthetic treatment

Roberto Kasuo Miyake, MD, PhD, Yung-Wei Chi, MD, Ian J. Franklin, MD, and Sergio Ghislini, MD, PhD, FACS, Sao Paulo, Brazil; Davis, Calif. London, United Kingdom; Ferrara, Italy; and Bethesda, Md

ABSTRACT
 Here we describe a combination of neodymium:yttrium-aluminum-garnet 1064-nm laser emission and injection of 75% dextrose solution to treat lower limb reticular veins. The strategy is known as cryo-laser cryo-sclerotherapy. Preliminary outcomes are reported, showing acromioclavicular in up to 30% of cases and intravenous thrombus in 10%. A satisfactory vessel elimination is found in 80% of cases. No improvement or worsening was reported in 10% of patients. The paper providing technical details with the aim of promoting homogeneity in future data collection so fostering publication of long term effectiveness and related comparative evaluation with sclerotherapy and laser treatment alone. J Vasc Surg Venous and Lym Dis 2020; 13:1

Keywords: Aesthetic; phlebology; Spider veins; Reticular veins; Telangiectasia; Laser; Sclerotherapy; CLaCS; Cryo-laser; Cryo-sclerotherapy; Score 9; Augmented reality.

JAMA Dermatology | Original Investigation

Sclerotherapy for Reticular Veins in the Lower Limbs: A Triple-Blind Randomized Clinical Trial

Mathias Bertolino, PhD, Rodrigo Galati Jedin, PhD, Regina Moura, PhD, Rafael Elias Ferraz Pereira, MD, Jani Victor de Oliveira Mariz, MD, Carlos Eduardo Pimenta Lúcio Filho, PhD, Genaro Pires Alcantara, MD, Caio Roberto Padovani, PhD, Winston Soretti Hoshida, PhD, Vitor Hugo Sobrinho PhD

Table 2. Results for Efficacy and Safety End Points at 60 Days After Treatment*

Characteristic	Group 1 (n = 15)	Group 2 (n = 15)	P Value
Efficacy			
Reticular venous score, median (SD), 0-4 [†]	3.07 (0.18-3.33)	4.30 (0.20-3.77)	.003
Eliminated reticular veins, mean (SD), % [‡]	31.17 (0.20)	65.41 (0.06)	<.001
Patients with up to 50% reduction, No. (%) [§]	0	4 (26)	.04
Patients with 50%-80% reduction, No. (%) [§]	4 (26)	11 (73)	.68
Patients with 80%-95% reduction, No. (%) [§]	11 (73)	21 (140)	.48
Patients with 100% reduction, No. (%) [§]	24 (156)	14 (93)	.005
Safety end point [¶]			
Pigmentation, cm	3.33 (0.00-26.52)	14.67 (0.00-24.70)	.09
Pigmentation, %	3.53 (0.00-26.00)	7.09 (0.00-50.82)	.06

Abb 2. Outcome for effectiveness and safety at 60 days after treatment of 18 patients with telangiectasia randomized to treatment with CLaCS pulsed laser + 75% glucose (Group 1) or 75% glucose (Group 2).

Table 1. Representative patients in study cohort

Condition	Group 1 (n = 16)	Group 2 (n = 16)	P Value
Reticular veins	15 (93)	15 (93)	.98
Spider veins	15 (93)	15 (93)	.98
Microangiomas	15 (93)	15 (93)	.98
Other	15 (93)	15 (93)	.98

A comparative study between cryo-laser cryo-sclerotherapy and sclerotherapy in the treatment of telangiectasia and reticular veins: A randomized controlled trial

Mathias Bertolino, MD, Rafael E. Ghislini, MD, FRCR, FEBRAS, Waleed Elsayid, MD, and Roberto Elmehrik, MD, Cairo, Egypt and Bethesda, Md

ABSTRACT
 Objective: Telangiectasia, characterized by dilated vessels, are frequently observed in the lower extremities. Sclerotherapy stands out as the predominant treatment of these vascular lesions. The integration of laser therapy with a mild sclerosing agent, serving as a synergistic sclerosant, presents an enhanced cosmetic treatment approach, aiming to optimize outcomes and minimize potential adverse effects. This study sought to evaluate the feasibility, efficacy, and safety of cryo-laser and cryo-sclerotherapy (CLaCS) and compare it with injection sclerotherapy for the treatment of telangiectasia and reticular veins.

Methods: In this randomized controlled trial, individuals expressing concerns about telangiectasia and reticular veins were recruited for aesthetic treatment. The enrolled patients were prospectively randomized according to the chosen treatment technique. Group A included patients undergoing CLaCS with 75% dextrose, focusing on a single area measuring 20 cm by 20 cm. Group B included patients receiving polydopamine injection sclerotherapy for a single area of the same dimensions.

Results: Group A comprised 100 patients and group B comprised 100 patients. The rates of complete lesion elimination after the first, second, and third treatment sessions were 64.0%, 88.2%, and 100% in group A and 50.0%, 74.0%, and 85.0% in group B, respectively. Group A exhibited a significantly higher complete elimination rate compared with group B at the conclusion of the study (P < .001). Furthermore, group A demonstrated a statistically significant lower incidence of post-treatment pigmentation and other complications compared with group B (P < .001). These findings underscore the enhanced efficacy and safety profile associated with the CLaCS technique using 75% dextrose compared with injection sclerotherapy with polydopamine.

Conclusions: CLaCS combining cryo-laser and cryo-sclerotherapy, demonstrated superior efficacy and safety compared with traditional polydopamine sclerotherapy for treating telangiectasia and reticular veins. J Vasc Surg Venous Lymphat Disord 2024;13(10):1001-1004.

Keywords: CLaCS; Cryo-laser cryo-sclerotherapy; Dextrose 75%; Injection sclerotherapy; Polydopamine; Telangiectasia; Reticular veins

Dissemination number: 10.1097/JVS.0000000000000000

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Phlebology

Nd:Yag laser combined with injection sclerotherapy in the treatment of reticular veins and telangiectasias (CLaCS method): A triple-blind randomized clinical trial comparing two sclerosing agents associated with same laser patterns

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Table 2. Patient 30 days result progressive*

Group	Excellent	Good	Regular	Poor	Ineffective	p
Group 1 n = 26	4 (23%)	16 (63%)	2 (11%)	0 (0%)	0 (0%)	0.79
Group 2 n = 22	0 (0%)	10 (45%)	7 (32%)	0 (0%)	0 (0%)	—

Table 3. Blinded photography evaluation*

Group	Excellent	Good	Regular	Poor	p
Group 1 n = 26	17 (65%)	5 (19%)	1 (4%)	1 (11%)	0.013
Group 2 n = 22	0 (0%)	1 (5%)	4 (18%)	17 (77%)	0.000

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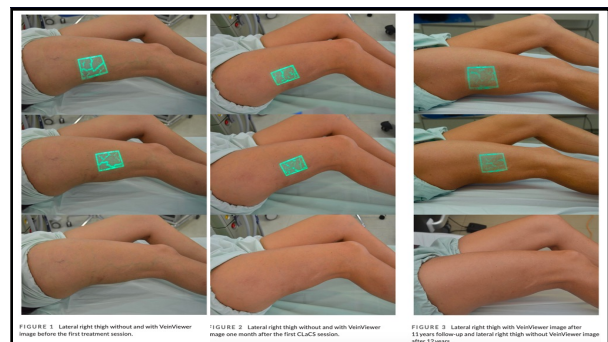
ORIGINAL ARTICLE

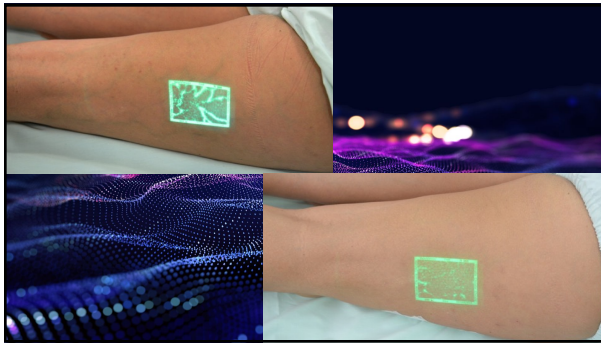
Case report: Novel leg vein treatment CLaCS guided by augmented reality 11 years follow-up

Kasuo Miyake MD, PhD | Marcelo Halfen Grill MD | Heidi Shihō Nagatani Feltoza MD

Abstract
Telangiectasias is most prevalent on the lower limbs and has been estimated to manifest in 40%-70% of the population. Treatments for telangiectasias include sclerotherapy, laser therapy, intense pulsed light treatment, microphlebectomy, and thermocoagulation. Cryo-Laser & Cryo-Sclerotherapy (CLaCS) effectively combines thermal and injection sclerotherapy. In this treatment, unwanted veins are targeted by a transdermal laser and immediately receive injection sclerotherapy. During the whole procedure, an air-cooling device (Cryo) blows onto the surrounding skin and tissue to prevent skin burn. Here, we present a case report of a challenging telangiectasias treated with CLaCS.

KEYWORDS
clacs, microphlebectomy, Nd:Yag, telangiectasias, varicose veins





Any "evidence" on Instagram?

- # Endovenouslaser 0.5K
- # Saphenousvein 0.1K
- # Endovenouslasertreatment 1K
- # Legveintreatment 1K
- # Foamsclerotherapy 1K
- # Foam 2K
- # Phlebology 14K
- # CLaCS 31K
- # Sclerotherapy 119K



VEITH SYMPOSIUM
at SAGES Connecting The Venous Community
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Comparison of CLaCS versus Sclerosant

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