CLaCS: Cryo-Laser & Cryo-Sclerotherapy

Kasuo Miyake, MD, PhD  – Clinica Miyake, Sao Paulo, Brazil

Disclosure
Kasuo Miyake, MD, PhD

I do not have any potential conflict of interest

Why we do not have yet a CLaCS prospective Comparative Study?

Clinical Equipoise!

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Why we do not have yet a CLaCS prospective Comparative Study?

Clinical Equipoise!
High Vein Pressure $\rightarrow$ No Valves $\rightarrow$ Cryo-Laser $\leftarrow$ Low Vein Pressure $\rightarrow$ Heart level $\leftarrow$ CLaCS

Hiroshi Miyake's hypothesis (late 60's):
- venous-capillary sclerosing agent reflux
- Dextrose 75%

Phlebology 2012; 27:383–389

Dextrose others, 64.66

Sclerosing Agents in Brazil

2006 CLaCS: Cryo-Laser & Cryo-Sclerotherapy

Synergy
Laser:
- Endothelium thermal lesion
- Vein contraction or Tunica Media destruction and edema
- Vein’s internal diameter gets smaller
Dextrose 75%:
- Osmolar lesion (no allergy, no ulcer)
- Lower volume
- Less clot
- Less hyperpigmentation

1+1=3

METHOD – CLaCS*

<table>
<thead>
<tr>
<th>Compression bandages</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun exposure</td>
<td>OK on the next day</td>
</tr>
<tr>
<td>Compression Stockings</td>
<td>No or Maybe (Grade 1B)**</td>
</tr>
<tr>
<td>Interval between Sessions</td>
<td>30 days (30% improvement)</td>
</tr>
<tr>
<td>Photo-documentation</td>
<td>100%</td>
</tr>
<tr>
<td>CLaCS at Clinica Miyake</td>
<td>100% since 1999</td>
</tr>
<tr>
<td>Session size</td>
<td>100-1000 shots</td>
</tr>
</tbody>
</table>


** Partsch H. Indications for compression therapy in venous and lymphatic Disease consensus based on experimental data and scientific evidence. Under the auspices of the IUP. Int Angiol 2008; 27:195-219
Electronic reviewed (keywords): 577 patients
100% treated by the same physician (K Miyake)
August 2011 – November 2016

Inclusion Factors:
- Female CEAP1
- Fitzpatrick I to V

Exclusion Factors:
- Reflux in the Saphenous Veins or Perforant Veins
- Feeder veins bigger that 1.5mm Fitzpatrick VI

Post treatment
control

70% Clearance after 2-3 CluCS sessions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigmentation</td>
<td>1.35%</td>
</tr>
<tr>
<td>Skin burning</td>
<td>0.19%</td>
</tr>
<tr>
<td>Matting</td>
<td>0.06%</td>
</tr>
<tr>
<td>Cutaneous Ulcer</td>
<td>0.00%</td>
</tr>
<tr>
<td>DVT</td>
<td>0.00%</td>
</tr>
<tr>
<td>Embolism</td>
<td>0.00%</td>
</tr>
<tr>
<td>Anaphylactic Shock</td>
<td>0.00%</td>
</tr>
<tr>
<td>Death</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

6 months complication follow-up.
CLaCS under sedation
Note an hypochromic area near the ankle: pre-existing lesion

DISCUSSION
CLaCS guided by Augmented Reality

- Safety
- Efficiency
- Synergy Effect
- Avoid Mini-phlebectomies
- Lower # of Sessions
- Cost???
- Time Consuming?
- Training?

Investment:
- Transdermal Laser
- Skin Cooling
- Augmented Reality
- Ultrasound
- Goggles
- TIME CONSUMING: proper charging

Private Practice Premium Treatment:
- at least 10x better than a bank investment

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CONTACT: Instagram/ Facebook/ Tweet: kasuomiyake