Office Based CHIVA

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Faculty disclosure

Fausto Passariello

I have no financial relationships to disclose
Ground floor and quick procedures

→ Many patients

VENOUS OFFICE

10th floor and long procedures

→ A few patients

varices
OB Chiva

Systematic organization of the working environment

reduce to a minimum

the instrumental and structural requirements
Chiva

- ambulatory, but generally surgical

OB Chiva

- equipped medical-surgical office
- all the needed authorizations
<table>
<thead>
<tr>
<th>PROCEDURES OF INTERVENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIVA</td>
</tr>
<tr>
<td>Crossotomy</td>
</tr>
<tr>
<td>Phlebectomy of tributaries</td>
</tr>
<tr>
<td>Ligature of perforators</td>
</tr>
<tr>
<td>Devalvulation</td>
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<tr>
<td></td>
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</tbody>
</table>
OB Chiva

immediate recall

classic non surgical operators
- Day Surgery
- Ambulatory Surgery

security arrangements

- Office Based Surgery
The organizing and structural requirements are then reduced without any change in security.
Laser in Chiva

RLDC

Riobamba Laser Draining Crossotomy

(F. Passariello – N. Morrison)
Riobamba
2009
Riobamba
2010
Riobamba
2014
The office based CHIVA

Abstract: The cure Conservatrice Hémodynamique de l’Insuffisance Veineuse en Ambulatoire (CHIVA) can be office based (OB). The OB-CHIVA protocol is aimed at transferring CHIVA procedures to specialists rooms. The protocol will check the feasibility of OB-CHIVA, data pertaining to recurrence, and will offer the opportunity to study saphenous femoral junction (SFJ) stump evolution, the role of the washing vessels and the arch recanalization rate, and gather new data.
The OB Chiva Web Page

Index
- The Office Based CHIVA Protocol
  - The protocol
  - Team registration
  - Registered access: coming soon
- Medical and Surgical Teams
  - No Disclosure Team
  - Protocol Agreement
  - Consenso al Protocollo
  - Consenso a Non

The Office Based CHIVA Protocol
- LASER, RF, Steam, Mechanical ablation, Glue/Super-Glue
- The Protocol is constituted by some public or already published material, which can be used and redistributed (citing the Authors and the source) and by several internal documents, which are private and are (or will be) available only to registered participants, Centers and Companies.

Registered access: coming soon
Several kinds of Crossotomy

- Traditional Crossectomy
- CHIVA Crossotomy
- R.L.D.C. Crossotomy
Traditional Crossectomy
CHIVA Crossotomy

Draining Vessels
R.L.D.C. Crossotomy

- Laser Ablation
- Washing Vessels
- Draining Vessels
The RDC Algorithm

Test

• SFJ TV incompetence
• Deviated reflux
• RET
R.L.D.C.
Materials and Methods

LASER equipment and fibers for endovenous treatments
Surgical Instruments for phlebectomy

Echo device: a careful study of
✓ the SFJ
✓ the washing vessels
✓ the draining vessels
R.L.D.C.
Main variables

#w  number of washing vessels
ϕw  max caliber of washing vessels
#d  number of draining vessels
ϕd  max caliber of draining vessels
L   length of LASER obliterated GSV arch at start
LT  length of LASER obliterated GSV arch at follow up
LS  length of LASER sub-occluded GSV arch at follow up
Relative contra-indications to surgical crossotomy

- **Local** (*obesity*)
  - To avoid local adverse effects
- **General** (*coagulation, epatopathies, cardiopathies, ...*)
  - To reduce the lasting time of interventions

Hemodynamics

- **Sh I**
- **Sh I+ II**
R.L.D.C.
Contraindications

No real contra-indication

- difficulties in the isolated ShIII
  - devalvulation difficult to perform
  - very hypoplastic peripheral GSV trunk
OB CHIVA CLINICAL CASES
R. L. D. C. Riobamba Laser Draining Crossotomy
Disconnected shunts

Persisting shunt

Disconnected shunts
# X-PASTE evolution

GSV LASER treatment

## Thrombosis

<table>
<thead>
<tr>
<th>echogenicity</th>
<th>extension</th>
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<tbody>
<tr>
<td>hyper</td>
<td>partial</td>
</tr>
<tr>
<td>mixed</td>
<td>complete</td>
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<tr>
<td>hypo</td>
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</table>

## X-PASTE score

<table>
<thead>
<tr>
<th>GSV</th>
<th>pre</th>
<th>goal</th>
<th>3d</th>
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<td>0,001</td>
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## GAC

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<tr>
<td></td>
<td>3</td>
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</tr>
</tbody>
</table>

Time of follow-up
\( \phi \) wash max 1.8 mm

Length treated with L.A.S.E.R. 3.5 cm

\( \phi \) drain max 2.1 mm

eq3 VL

R. L. D. C

Riobamba

LASER

Draining

Crossotomy
Persisting shunt

Disconnected shunts
X-PASTE evolution

GSV LASER treatment

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VL

GVV
POST OPERATIVE RESULT
TRUNK DRAINING
distal floating thrombus
POST OPERATIVE RESULT
SFJ WASHING
proximal floating thrombus
OB CHIVA STATISTICS
OB CHIVA CASES

N Patients 13
Sex 6M 7F
Age 47.9 +/- 15.2 yo (32-78yo)
Limb 10RT 3LT
CEAP C1 0, C2 10, C3 0, C4 2, C5 0, C6 1
Anthropometry and GSV caliber

- height of the groin: 74.5 +/- 6.1 cm
- height of the first re-entry perf: 36.3 +/- 14.2 cm
- mid-thigh GSV caliber: 7.4 +/- 3.2 mm
SFJ study

- Number of washing vessels: 2.5 +/- 1.1
- Max washing caliber: 3.3 +/- 1.7 mm
- Number of draining vessels: 1.9 +/- 0.7
- Max draining caliber: 2.1 +/- 0.5 mm
PROCEDURES

- LASER
  - 12 808 nm power 14w pullback speed 0.1 cm/s LEED 140 J/cm
  - 1 1470 nm power 6w pull back speed 0.1 cm/s LEED 60 J/cm

associated phlebectomies 8/13
associated UGS 5/13
MISMATCH BETWEEN PLANNED AND PERFORMED PROCEDURE

- planned GSV length
  - 7.7 +/- 3.6 cm

- treated GSV length
  - 6.8 +/- 5.3 cm
### R.L.D.C. Results

#### Reflux

<table>
<thead>
<tr>
<th>#cases</th>
<th>13</th>
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<tbody>
<tr>
<td>reflux</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>23</td>
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</table>

- # reflux: 3
- % reflux: 23
- insufficient administered energy, open SFJ
- incompetence of one of the washing vessels, not detected pre-operatively by reflux competition
Riobamba Laser Draining Crossotomy (RLDC) an anecdotal long term follow-up

• 1 GSV case treated in 2009
  Instrumental Follow-up at 5 years

• 1 GSV case treated in 2010
  Only Clinical Follow-up at 4 years
5 y follow up

pre-intervention
## Follow up

**LGGJ – 2009/2014**

<table>
<thead>
<tr>
<th></th>
<th>2009 (pre)</th>
<th>2009 (3 days)</th>
<th>2014 (5 years)</th>
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<tbody>
<tr>
<td># w</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>( \phi w )</td>
<td>2.9</td>
<td>2.9</td>
<td>3.6</td>
</tr>
<tr>
<td># d</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>( \phi d )</td>
<td>2.9</td>
<td>2.9</td>
<td>2.76</td>
</tr>
<tr>
<td>PASTE</td>
<td>0st</td>
<td>4t</td>
<td>0st</td>
</tr>
<tr>
<td>X-Paste</td>
<td>0.0001</td>
<td>0.0003</td>
<td>0.001107</td>
</tr>
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**Clinical results at 5 y**

- Very well
- He complains for some varicosities in the leg (partially fed by the medial accessory)
- He is satisfied and asks for an intervention also on the other limb.
X-PASTE evolution

GSV LASER treatment

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Time of follow-up

pre

goal

3d

5y
Riobamba Foam Draining
Crossotomy (RFDC)

- 1 SSV case treated in 2010
Follow-up at 4 years
Post-LASER Recanalization

The patient feels much better and both the ulcers quickly healed in 3 months after the intervention, though it was hemodynamically a failure. A marked improvement of QoL scores was registered at 1 year of follow-up.
pre-intervention

1 year follow-up
The Vascular List

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