Compression for mild to moderate C3 patients?
Still a lot to know...

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Introduction

• Lower limb oedema is a complication of patients suffering from superficial chronic venous disorders (SCVD)
• = C3 of the CEAP classification
• = a “perceptible increase in the volume of fluid in skin and subcutaneous tissue, characteristically indented by pressure” (pitting test)
• But…
  – C3 = incidence varying from 2.2% to 13.4 % in epidemiologic studies
  – C3 = the least agreement in CEAP interobserver variability

How to improve C3 Diagnosis?
The use of ultra-sounds can detect oedema


Caggiati A. EJVES 2016
The routine use of ultra-sounds can detect oedema.
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Caggiati A. EJVES 2016
How to improve C3 Diagnosis?

The routine use of ultra-sounds can detect, early in the day, patients with negative pitting test and who have oedema (anechoic bands in the hypodermis).

BMI < 30 and < 6h after aw
CVD = no trophic change

Rastel D. VASA 2016
New trial

Main objective:

Is the subepidermis low-echogenic-band thicker in C3 patients?

Secondary criteria:

Evaluation of the blurring of the dermo-hypodermis border
Pilot study, design, material.

Prospective monocentric single center trial

1. Investigator A
   - Records 100 images:
     - Skin US (15 MHz)
     - Ankle aspect
     - 50 with oedema
     - 50 no oedema

2. Investigator B
   - Measurement of
     - Dermal thickness
     - Blurring
     - Blindly

3. Investigator C
   - Data analysis

- superficial venous disorders only
- C3s to C4a EpAsPr
- < 80 year old
- < 6 h after awakening

Data analysis graph:
- Dermal thickness (mm) investigator A
- y = 1.0312x
- R² = 0.9042
100 images

96 SCVD patients
53% female
65 ± 13 yo
26.6 ± 5 BMI

No trophic change
Both groups comparable but not for BMI

Skin (adapted for Benias, et al.)

Intestinal mucosa
Compression

• Long term treatment of mild to moderate C3 patients:

“Recommendations 3 and 4: we recommend the use of MCS to reduce and prevent leg swelling in patients with CVD (Grade 1 B)”


Pressure ? Duration ? Protocols ?
Compression

If the goal is to treat mild to moderate oedema in CVD patients....
If the objective is to get them free of any oedema, ..... what protocol should we use? Protocols that alternate low pressure phases and higher pressure phases?

Subepidermis oedema drainage: Low pressure?

Hypodermis oedema drainage: High pressure?
Conclusions

• Since compliance to compression therapy using medical stockings is poor we should focus only on patients who will get a clinical benefit to compression (permanent vs non permanent oedema,…)

• Routine sonography could help to better orientate patients toward compression

• Interpretation of results remains difficult and needs more investigations

• Long term compression protocols must be clarified.

• My colleagues…..