Compression to reduce edema in patients with arterial occlusive disease

Double focal compression bandaging

Before

After

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Can we use compression therapy in patients with arterial occlusive disease to reduce edema?

**YES, WE CAN!**

Careful follow up during the first days/weeks is necessary!
Double focal compression bandaging

To establish a differential diagnosis
To establish a clinical diagnosis
To discard severe arterial disease

- Diagnostic tools
  - Physiological saline
  - Weight control
  - Edinburgh claudication questionnaire

This is the material used for healing venous leg ulcers.
We use: Non-elastic bandage because of its stronger hemodynamic efficiency on calf muscle pump.

Optimal legs compression levels
Male 49 years old, arterial hypertension, diabetes and dyslipidaemia. Smoker of 40 cigarettes or more/per day.

Severe arteriopathy disease (Syndrome-Leriche)

**Hospital admissions**

18-09-2008…….. First surgical intervention. 
Aorto-bifemoral bypass surgery.

20-12-2016 / 8 years later……., Second surgical intervention. 
Thrombectomy right branch, bypass to right deep femoral artery.

15-09-2017 / 9 months after the latter…
Twice surgical intervention with amputation of 5º right toe

18-10-2017
“Double focal compression bandaging”
He himself removed the bandaging for 15 days, and the wound worsens. We bandage the leg again, and the wound heals.
Necrotic lesion in 2nd left toe, has been resolved
Oedema has decreased
Male 56 years old, arterial hypertension, dyslipidaemia, Ex-smoker goes to the hospital because of severe pain at rest, in the forefoot and first toe of the left foot.

Severe arteriopathy disease

**Hospital admissions**

- **23-03-2011**……. First surgical intervention.
  Femoro peroneal bypass (middle third) / left leg.

- **6-04-2011**……..Second surgical intervention.
  Transmetatarsal amputation left foot

- **5 years later (4-08-2016)**……..Third surgical intervention.
  Ischemic cardiopathy: Percutaneous coronary intervention.

**ABPI** (Left leg)

- Before compression
  - (31-07-2013) = 0.68
  - (26-03-2014) = 0.60
  - (27-10-2014) = 0.58

**16-08-2016**

“Double focal compression bandaging”
We can observe how the ABPI improves after applying: “Double focal compression bandaging”
After applying this technique, we can note how this index improves.

There was an increasing in the ABPI.
The patient chose to self-bandage as part of a long-term management plan.
Female 72 years old, with chronic diseases: Type 2 diabetes mellitus/ Ataxia/ Asthma/ Thalassemia/Coxarthrosis/ Arterial hypertension.

The patient goes to the hospital because of severe pain in right foot.

Hospital admissions

28-05-2015….Bilateral femoro-popliteal oclusion (Right leg) / Surgical intervention.
Endovascular surgery on the right superficial femoral with local fibrinolisis, angioplasty and stent.

24-06-2015: Peripheral arteriopathy. Chronic ischaemic grade IV at left leg.
Two weeks later, the patient was released from hospital, without being operated. She has an ulcer (1.5 cm) in left leg.
Diagnosis:Femoro-popliteal occlusion in left leg.

11-08-2015: Double focal compression bandaging
Clinical course of the ulcer after applying «double focal compression bandaging technique»
July 2015
Before compression
ABPI= 0.54

After compression.
ABPI= 0.91
(11-01-2017)

Currently.
ABPI= 1.14
(2-04-2018)

After compression.
ABPI= 0.94
(11-01-2017)

Currently.
ABPI= 1.33
(2-04-2018)

There was an increasing of ABPI, and a decreasing of edema.
After applying this technique, we can note how this index improves.

There was an increasing in the ABPI.
1.- When ABPI is between 0.5- 0.8, in expert hands, we can use compression therapy, making daily a follow up of clinical course.

2.- Compression “DFCB” reduces oedema and improves arterial flow, demonstrated in three cases by an increasing of ABPI, suggesting an improvement of the collateral circulation due to the massaging effect of inelastic compression, together with walking exercises.

3.- We have to keep in mind, with this technique, we can reduce oedema and improve arterial flow, but we cannot heal arterial disease.
Thank you very much for your attention