

Rotterdam, The Netherlands, 6-9 June 2018

# 8TH INTERNATIONAL LYMPHOEDEMA FRAMEWORK CONFERENCE



See you  
on board!

NLNet  
Netherlands Lymphoedema Network  
Rotterdam - The Netherlands

WWW.2018ILFCONFERENCE.ORG

# ICC

International Compression Club

## Compression to reduce edema in patients with arterial occlusive disease



Double focal compression bandaging

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SERVIZO  
GALEGO  
de SAÚDE

## GUIDELINES

Greater than 1.4	Calcification / Vessel Hardening	Refer to vascular specialist
1.0 - 1.4	Normal	None
0.9 - 1.0	Acceptable	
0.8 - 0.9	Some Arterial Disease	Treat risk factors
0.5 - 0.8	Moderate Arterial Disease	Refer to vascular specialist
Less than 0.5	Severe Arterial Disease	Refer to vascular specialist

Stanford Medicine 23

**Compression therapy is not contraindicated**

**Is compression therapy contraindicated ?**

**Compression therapy is contraindicated**

**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 !**







This is the material used for healing venous leg ulcers.



## Double focal compression bandaging

To establish  
a differential diagnosis

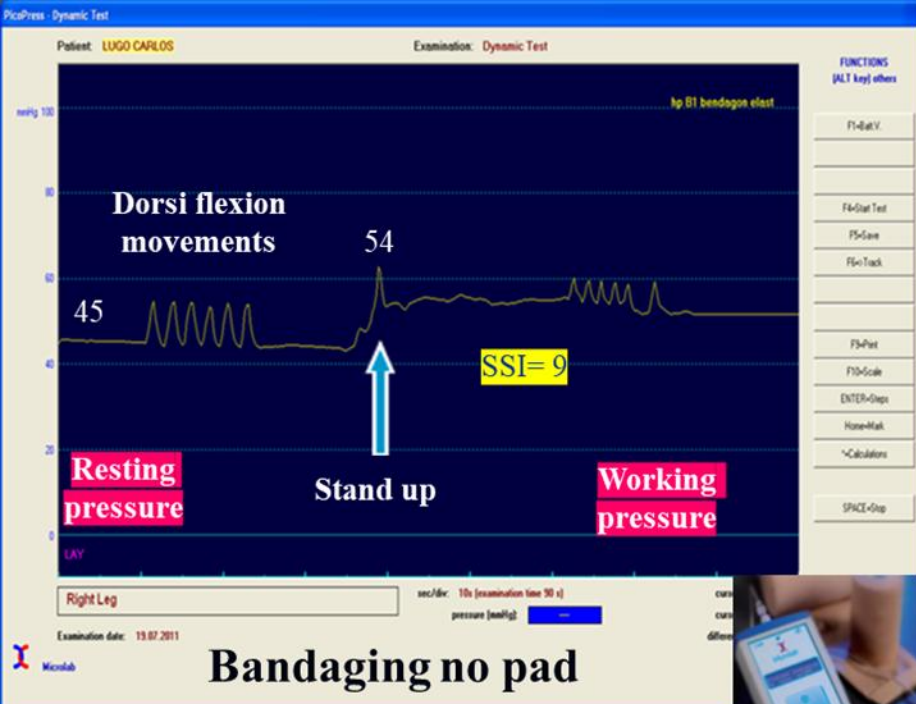
To establish a  
clinical diagnosis

To discard severe  
arterial disease

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### diagnostic tools





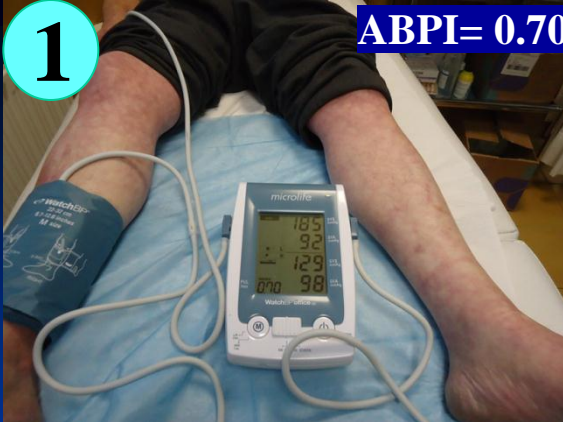
**We use:**

**Non-elastic bandage**  
because of its stronger  
hemodynamic efficiency on  
calf muscle pump.

**Optimal legs compression levels**

1

ABPI= 0.70



Male 49 years old, arterial hypertension, diabetes and dyslipidaemia.

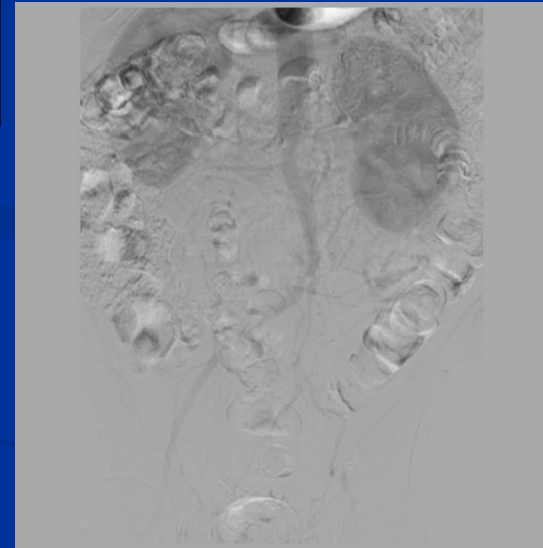
Smoker of 40 cigarettes or more/per day.

Severe arteriopathy disease  
(Syndrome-Leriche)

Hospital admissions

18-09-2008..... First surgical intervention.  
Aorto-byfemoral 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 5° right toe

18-10-2017

“Double focal compression bandaging”





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**

18-10-2017

12 days later

40 days later

82 days later



**Oedema has decreased**



18-10-2017



11-01-2018



16-10-2017

The patient was  
released from  
hospital.....

Before  
Compression  
 $ABPI = 0.71$

After  
Compression  
 $ABPI = 1.04$

2



(11-03-2011)

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.

16-08-2016

“Double focal compression bandaging”

ABPI (Left leg)

Before compression

(31-07-2013) = 0.68

(26-03-2014) = 0.60

(27-10-2014) = 0.58



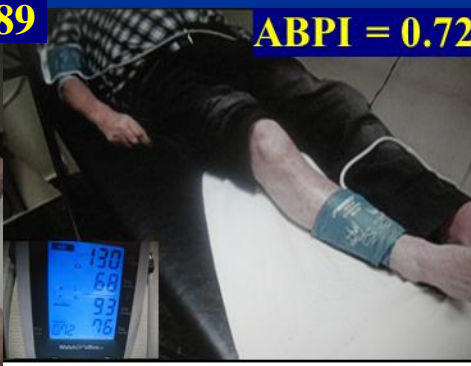
# We can observe how the ABPI improves after applying : “Double focal compression bandaging”

4 months later.....

**ABPI = 0.89**

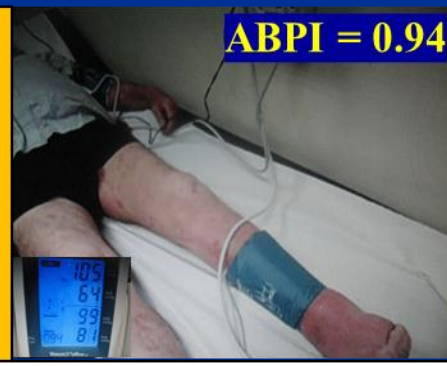


**ABPI = 0.72**

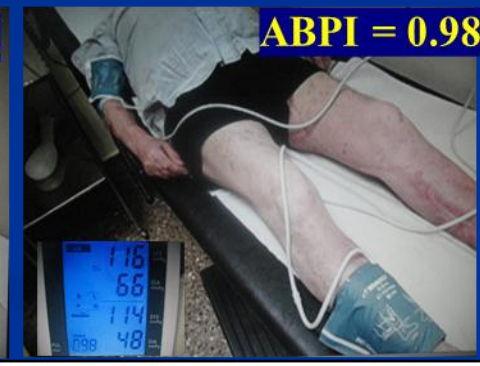


10 months later.....

**ABPI = 0.94**



**ABPI = 0.98**

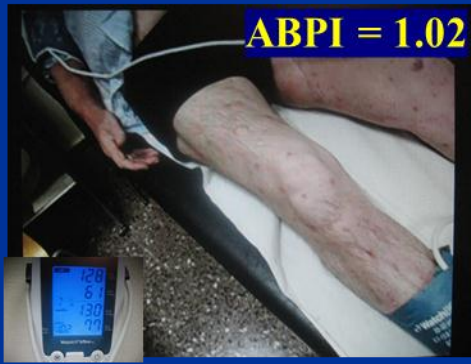


16 months later.....

**ABPI = 0.98**



**ABPI = 1.02**



22 months later.....

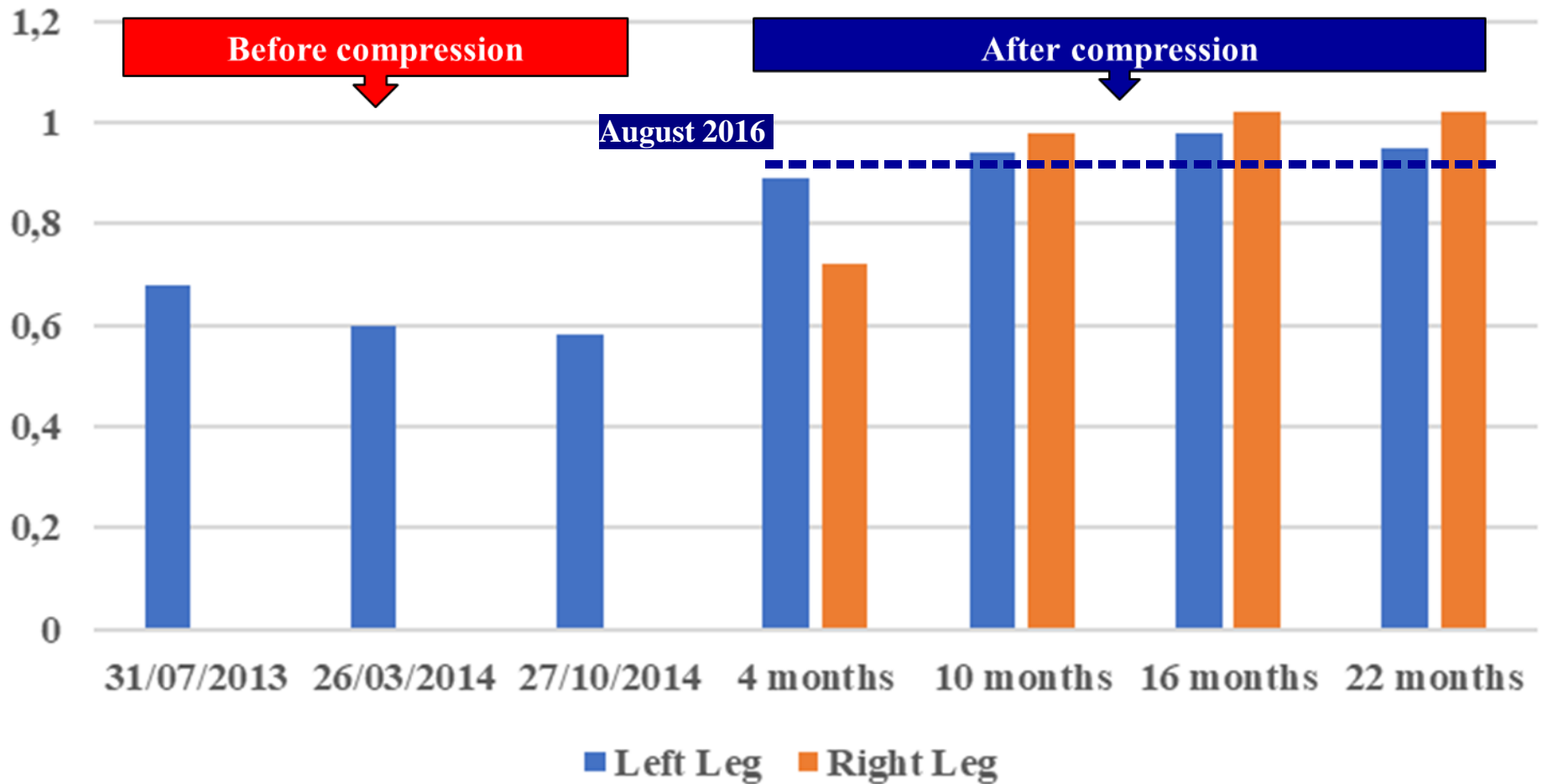
**ABPI = 0.95**



**ABPI = 1.02**



# ABPI



**After applying this technique, we can note how this index improves.**

**There was an increasing in the ABPI.**





**December 2016**



**September 2017**



**May 2018**



**The patient chose to self-bandage as part of a long-term management plan.**

3

(23-05-2015)

**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 occlusion ( Right leg) / Surgical intervention.**

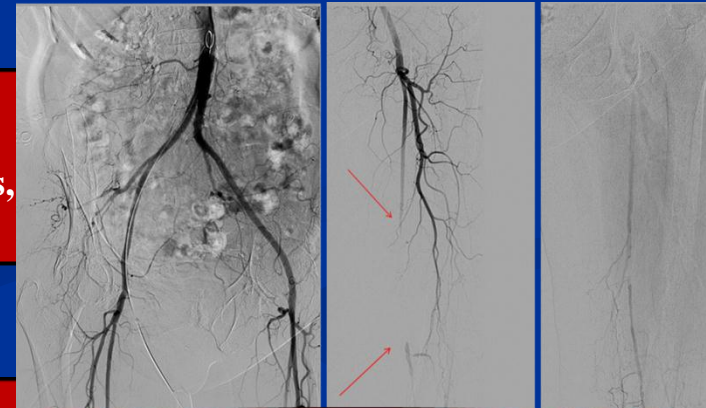
**Endovascular surgery on the right superficial femoral with local fibrinolysis, angioplasty and stent.**



**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.**



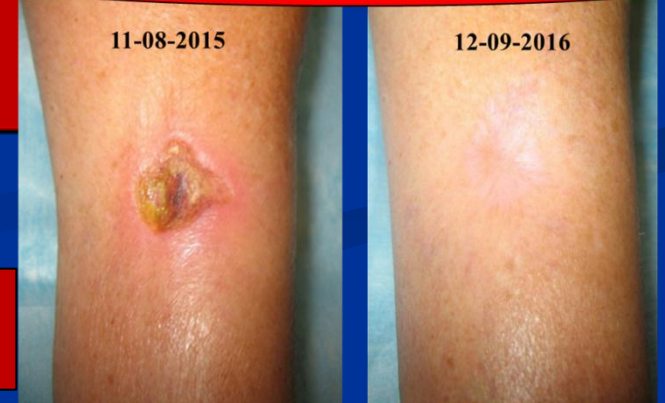
**11-08-2015: Double focal compression bandaging**



**Angiography showing multi-segment arterial occlusive disease.**

11-08-2015

12-09-2016





11-08-2015

Day 0

Day 1

Day 2

Day 3

Day 4

Day 21

1 month

2 months

3 months

4 months

Ulcer healed

5 months

6 months

7 months

8 months

9 months

*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)**



10-01-2016



12-09-2016



27-03-2018

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



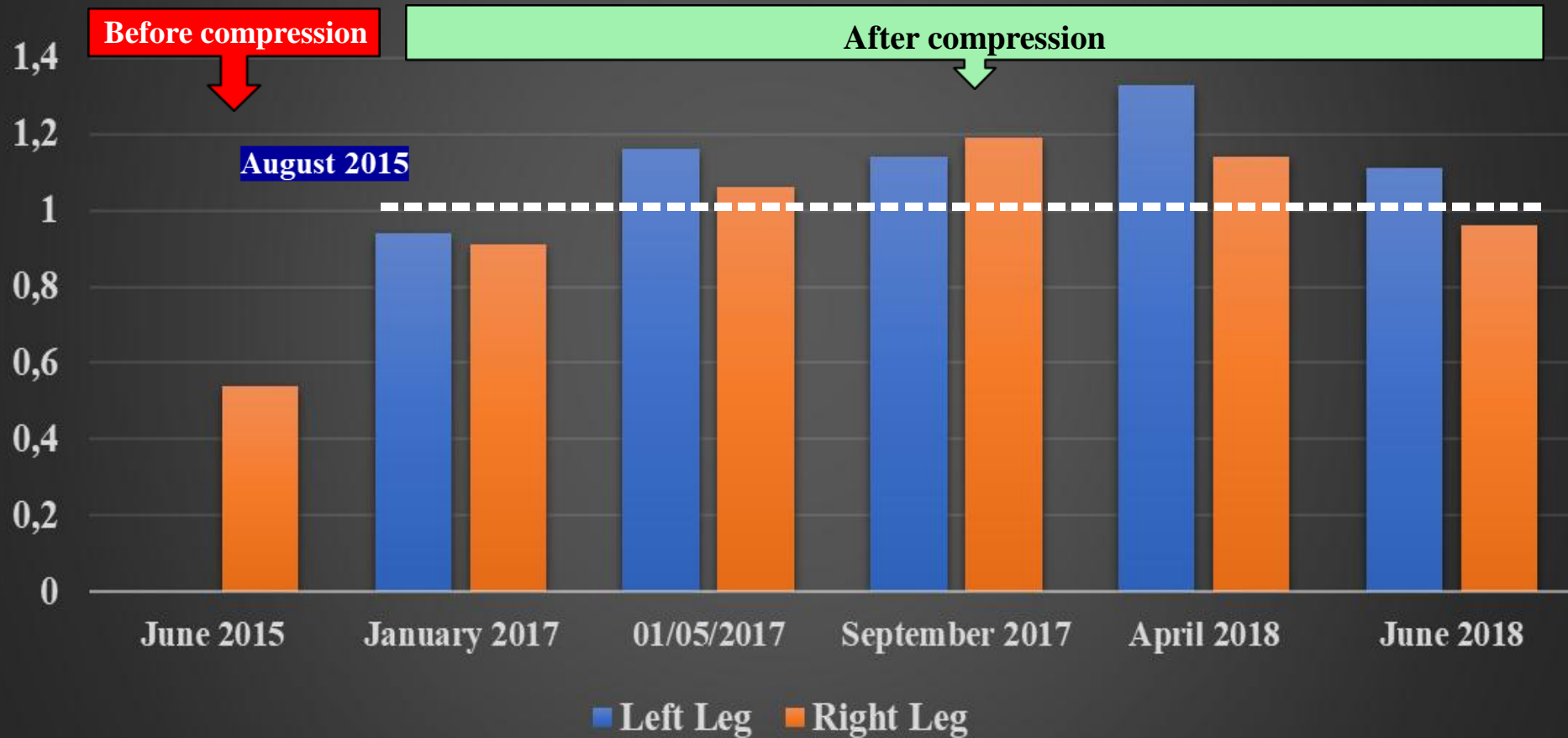
**Currently.**  
**ABPI= 1.33**  
**(2-04-2018)**



**There was an increasing of ABPI, and  
 a decreasing of edema.**



# ABPI



**After applying this technique, we can note how this index improves.**

**There was an increasing in the ABPI.**

# CONCLUSIONS

- 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*