Acute effects of calf neuromuscular electrostimulation (Veinoplus Arterial®) on the microcirculation in patients with peripheric arterial disease at the stage of permanent ischemia

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Peripheral arterial disease and calf neuromuscular electrostimulation

Acute effects :

– Increased arterial inflow

– Increased venous outflow

Chronic effects :

– Increased walking distance without pain

– Increased ABI

Pilot Study

Prospective, mono-centric study

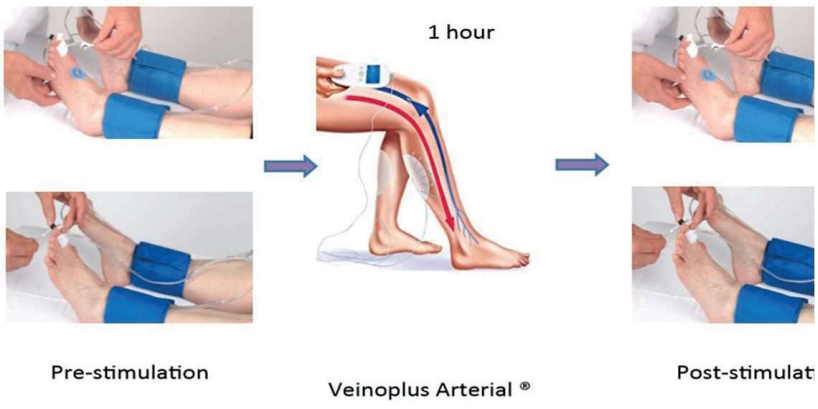
N=6 (average age = 74,3 ± 10,7)

Criteria for inclusion: patients with chronic permanent ischemia

– TCPO24 < 35 mm Hg

– Toe Pressure 5< 50 mmm Hg

Study design



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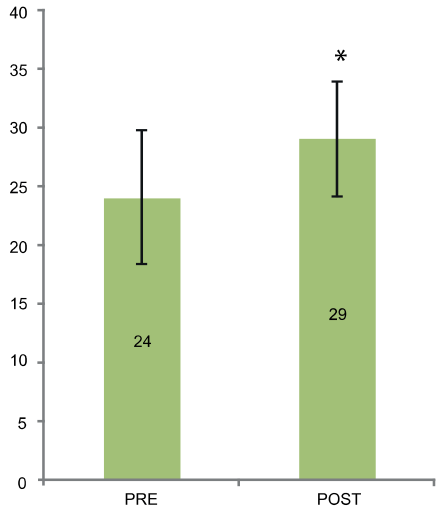
[4] TCPO2 20 min after
[5] TP : 5 min after

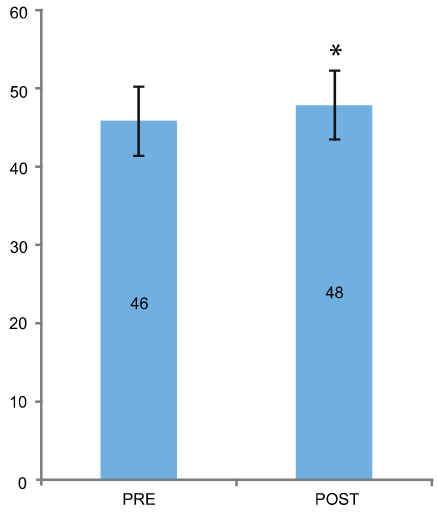
Results

$TCPO_2$ in mm Hg



+ 20,8%

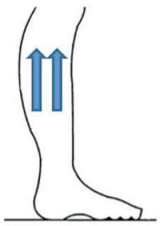
TP in mm Hg



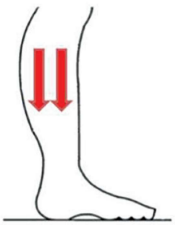
+ 4,4%

Physiological hypothesis

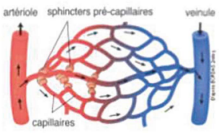
Increased venous outflow



Increased arterial inflow



Improved microcirculation



O_2 and glucose

Arterio-veinous continuum

Conclusion

Good tolerance, easy to use
Improved perfusion
Arterio-veinous pressure gradient
Chronic muscle / vascular effects