Neuromodulation FREMS in the treatment of diabetic peripheral arterial disease

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Background

Peripheral arterial disease (PAD) may be asymptomatic, or associated with intermittent claudication or with critical limb ischaemia. Patients with critical limb ischemia should be revascularized to minimize the risk of limb loss.
In absence of tissue damage, also with low ankle arterial pressure and low oxymetric values, there are no consistent evidence to support specific treatment

FREMS therapy

FREMS neuromodulation (frequency rhythmic electrical modulation system), utilized for the treatment of diabetic neuropathy, was demonstrate to produce vasoactive products, in particular VEGF.

Aim of the study

to determine if the use of FREMS neuromodulation in diabetic patients with peripheral limb ischaemia, is effective on oxymetric values and pain free walking distance improvement.

Matherials and Methods

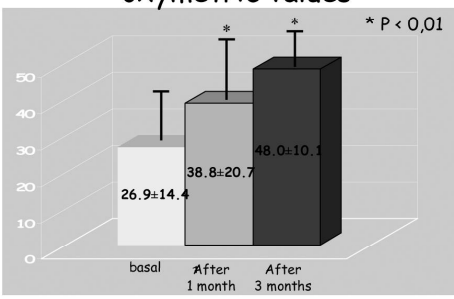
14 patients with PAD, were evaluated with transcutaneous oxymetry and with a standardized treadmill testing. 18 limbs with oxymetric values (TcpO2) below 50mmHg were founded.

All patients received 10 consecutive session of FREMS therapy.

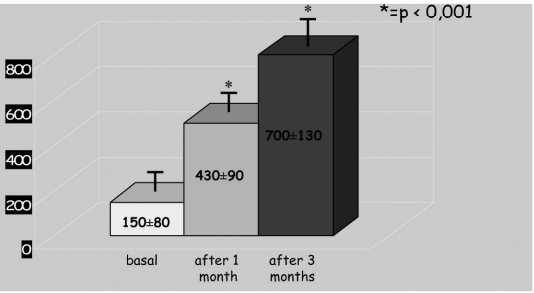
After 1 and 3 months we performed a transcutaneous oxymetry and patients with claudicatio (n.6) repeated treadmill walking test.

Results

Basal, after 1 month and after 3 months oxymetric values



Pain free walking distance in patients with claudicatio



Conclusions

In diabetic patients with PAD, FREMS therapy seems to achieve considerable effects on improvement of oxymetric values and pain free walking distance. In absence of indications for revascularization this therapy can lead to good amelioration without risks