

MICROLYMPHOGRAPHIC EXPLORATION OF THE EFFECTS OF LPG TECHNIQUE ON PATIENTS AFFECTED WITH CONSTITUTIONAL FUNCTIONAL VENOPATHY (CFV)

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Objective

The objective of the study is to evaluate the efficacy of the LPG treatment on patients suffering of constitutional functional venopathy (CFV) by measurement of different micro circulatory parameters in order to better understand the micro circulatory modifications before, during and after LPG treatment.

Method

The studied population includes 10 female patients, average age : 41 years \pm 8 .

Each patient had a micro circulatory assessment (Cf here below),

before (W0),

during (W4),

at the end (W7) and

3 weeks after the end of the treatment (W10).

The treatment is performed on the thigh and abdomen with specific maneuver according to the Co.S.I.R.E treatment protocols (Scientific Italian Committee of Research on Endermologie).

MICROCIRCULATORY ASSESSMENT

1. Dynamic capillaroscopy (basal and with fluorescein)
2. Microlymphography
3. Measurement of the intra microlymphatic pressure

Results

Regarding capillary blood vessels, red cell speed flow, relative hematocrit (Hct rel), time appearance of the tracer during capillaroscopy with fluorescein and measurement of the capillary permeability, we did not observe significant difference between S0, S4, S7 and S10.

On the contrary, we observed significant modifications on microlymphography parameters:

Diameter of the microlymphatic vessels decrease significantly ($p < 0.05$) from 79.1 to 71.4 microns (Figure 1); also the number of microlymphatic meshes per mm² ($p < 0.01$) from 17.9 (W0) to 8.4 (W10) (**Figure 2**) indicating a decrease of the lymphatic stasis.

The main observation is the significant decrease ($p < 0.01$) of the intra microlymphatic pressure from 5.4 mmHg (W0) to 2.87 mmHg (W7) and to 3.38 mmHg (W10). This last result showed that even 3 weeks after the end of the treatment, we observed a decrease of the lymphatic pressure reflecting a better drainage of the superficial lymph towards the deep circulation and so a weak stasis (**Figure 3**).

Interstitial pressure decrease weakly but significantly (data not shown).

Conclusion

LPG Technique has an effect particularly important on lymphatic microcirculation. Decrease of the number of superficial lymphatic meshes, the lymphatic pressure and the diameter of the lymphatic capillary vessels is the unquestionable result of an improvement of the drainage towards the deep circulation. Such positive effect is maintained even 3 weeks after the end of the treatment. Those results open up the possibility to use LPG Technique for the treatment of primary and secondary lymphedema, in association with the others commonly used techniques of lymphatic drainage.

W0 (S0): before treatment (baseline),

W4 (S4): after 4 weeks of LPG treatment,

W7 (S7): at the end of LPG treatment

W10 (S10): 3 weeks after the end of the LPG treatment

Photo of microlymphography :

