

### USE OF LYMPHOSCINTIGRAPHY AND COMPLEX PHYSIOTHERAPY TO PREDICT, EVALUATE AND TREAT LYMPHEDEMA

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Lymphedema is more common than most physicians realize. There are many methods used for its evaluation as well as for the evaluation of treatment results (perimetry, volumetry, tonometry). Lymphoscintigraphy is the study of choice for lymphatic function analysis that points out lymphatic status through path ways, lymph nodes and flow evaluation. Complex desconggestive physiotherapy is the main therapy for the treatment of lymphedema. Here, we evaluate lymphoscintigraphy and complex physiotherapy - desconggestive massage, Lymphapress pump, water exercises and compressive garment (Venosan) - and its role in lymphatic staging and treatment, respectively. Twenty-two patients with primary and secondary lymphedemas in faces and extremities underwent lymphoscintigraphy pre and post treatment. The obtained results show: (i) increase of lymphatic status and decrease of lymphedema in all patients and (ii) development of normal flow in those patients that had lymphatic insufficiency in contralateral extremities, without lymphedema. This last group of patients was only stimulated by water exercises. In conclusion, lymphoscintigraphy is an effective examination for evaluation of lymphatic function that is non invasive and presents low morbidity. The physiotherapeutic scheme here proposed was effective to improve lymphatic flow and reduce lymphedema. Moreover, water exercise is able to avoid lymphedema in patients with lymphatic insufficiency. More studies in patients with lymphatic insufficiency are ongoing.

### LPG® TECHNIQUE: THERAPEUTICS POSSIBILITY IN THE COMPLEX (COMBINED) LYMPHATIC THERAPY.

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LPG® technique is a particular instrumental method composed by a mechanical electronic device. Designed by French Louis Paul Guitay in the 1970s for softening scars, it consents to create a standardized massage effect.

Two moving rollers, shifting over the skin, make traction on the tissue; at the same time, the continuous or intermittent aspiration, produces a stimulation by negative pressure.

In this way it is possible to obtain a proper mobilization of cutaneous and subcutaneous tissue whose architecture is mobilized by mechanical device.

The mechanism of action must be found, on the basis of scientific data now available, in the re-establishment of microcirculation and of the vascular tissue exchange.

From these hypothesis the Authors want to report to their personal experience about the Complex (Combined) Lymphatic Therapy. They suggest the LPG® technique as a helping method to flank to the other ordinarily used techniques (manual lymphatic drainage, compression garments and/or compression bandaging, special exercises) and never as an alternative to methods.

In particular the LPG® technique appeared very useful to check-up of some complications correlated to lymphedema such as the fibrous tissue, post-radiotherapy fibrous and cicatrized results post-surgical.

After analysis of the action's mechanisms and strategic applications of the LPG® we've just upon mentioned, the A. show the response of the treatment through ecographic valuations realized by a real time Acuson ASPEN IMAGEGATE having a linear probe small parts from 7,5 - 10 MHz.

### LPG System in the Treatment of Peripheral Lymphedema: Clinical Preliminary Results and Perspectives.

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Lymphedema is a chronic evolutive disease with progressive appearance of fibrosis in the interstitial tissue involving dermal and hypodermal layers.

We realized a prospective and randomized study in twenty patients with secondary lymphedema of arms and legs treated with Cell M6-IP device to evaluate the antifibrotic effects with the LPG technique.

The results were assessed with photographs, volumetric measurements, US, lymphoscintigraphy, MR and Laserdoppler.

The results are encouraging above all in decreasing the fibrotic component of lymphatic edema.

### PRELIMINARY STUDY ON AN OBJECTIVE PROJECT IN THE TREATMENT OF LYMPHOEDEMA IN A LOCAL HEALTH SERVICE TERRITORY.

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Aim of this study is to increase and refine the adjuvant and rehabilitation technique of lymphoedema through the realization of an angiological-fisiatrical ambulatory for the application of the combined treatment (manual lympho-drainage, skin care, compressive bandaging, physical therapy, self-drainage) and the realization of two phases of the project (I°phase: informing general practitioners and district doctors, setting up a phone line to answer patients' queries, mobilizing voluntary organizations in this sector, providing clinical records with a personal assistance plan, providing patients with informative material, evaluating patients' needs and reactions to services provided; II°phase: combine angiological-physiatrical assessment, combined personalized physical-rehabilitation training, health education of personal in order to provide the users with a more sensitive service). This preliminary study with an accrual of 70 patients (28 primary and 42 secondary lymphoedemas) has highlighted how the integration of medical doctors, physiotherapists and nurses according to their specific abilities, enables them to render the combined treatment efficiently. The preliminary data obtained even though do not statistically significant, show how combined ambulatory treatment of lymphoedema guarantee a significant volumetric reduction in limbs and a net symptomatological improvement. This encourages us to continue in this direction in order to evaluate the data at the end of the project itself. References: M.Foldi, J.R.CasleySmith: Lymphangiology. Schattauer Verlag Stuttgart, 1983. M.Foldi, R.Strobenreuther: Grundlagen der manuellen lymphdrainage Urban-Fischer Verlag Munchen-Jena 2000.h