

## Evolution of Godoy & Godoy manual lymph drainage. Technique with linear movements

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### Abstract

Manual lymph drainage has become the mainstay in the treatment of lymphedema for decades now. Five evolving variants have been described by Godoy & Godoy over the years: i) manual lymph drainage using rollers; ii) self-applied manual lymph drainage using rollers; iii) manual lymph drainage using the hands (manual lymphatic therapy); iv) mechanical lymphatic therapy using the RAGodoy® device; and v) lymphatic therapy using cervical stimulation in general lymphatic treatment. After breast cancer treatment using adapted technique with intermittent compression therapy. Lymphoscintigraphy, volumetry and bioimpedance were employed to analyze such treatment techniques applied to the upper

and lower extremities. These treatment and evaluation topics are described in this brief report.

### Brief Report

A technique of manual lymph drainage is a light massage therapy introduced by Taylor Still in the late 1800s<sup>1</sup> and first used in the clinical practice in 1936 with the publication by the Vodder method in Paris. This publication recommended hand movements in semicircles based on the circular movements of massage.<sup>2</sup> This technique, known as manual lymph drainage, became the mainstay in the treatment of lymphedema over the years. Thus it is one of the most important contributions to lymphedema treatment and to many aesthetic procedures.

In 1999 Godoy & Godoy published a new concept of manual lymph drainage in which they advocate a linear motion along the path of lymphatic vessels towards the corresponding lymph nodes.<sup>3,4</sup> The main change compared to previously used lymph drainage techniques is the type of movement. In this new method, compression of vessels initially used rollers (Figure 1), but this was eventually changed to hand pressure (Figure 2). The pressure should remain constant along the entire route of the vessel.<sup>5</sup> The changes in limb volume resulting from the use of this device have been evaluated by lymphoscintigraphy,<sup>6-8</sup> volumetry<sup>9</sup> and bioimpedance.<sup>10</sup>

Over the years the Godoy & Godoy technique has evolved and several books and articles evaluating the therapeutic

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results have been described.<sup>3,4,11-15</sup> The first descriptions used rollers for manual lymph drainage with the technique evolving to self-applied manual lymph drainage using rollers (Figures 3 and 4).<sup>3,4,14</sup> The rollers were abandoned after some time due to the difficulty of standardizing the type of material used to manufacture the rollers. Thus, the technique has undergone changes, while maintaining its principle of linear movements in the direction of the lymph nodes.

*In vitro*, *in vivo* and clinical studies have been developed to demonstrate the scientific basis of these movements in the

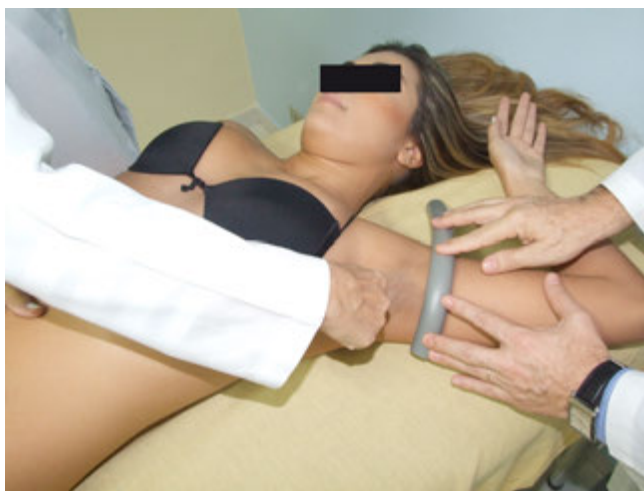


Figure 1. Manual lymphatic therapy using rollers indicated in primary lymphedema and contraindicated in secondary lymphedema.



Figure 2. Manual lymphatic therapy using linear movements for primary lymphedema.

treatment of lymphedema.<sup>5</sup> The most important studies however, performed with nuclear medicine, showed the displacement of macromolecules with two models being used to develop and evaluate this technique. The first model performs lymphoscintigraphic scans before and after linear lymph drainage in a region of a limb, Figure 5A and B, usually the thigh (without simultaneous monitoring of images) to see the resulting movement of the radioisotope. The second model, which is more appropriate to immediately assess the effect of the movements, is, after an imaging scan, to perform linear lymph drainage with simultaneous monitoring on a computer screen.

This technique allows a visual evaluation on the computer screen of the displacement of lymph caused by the movement of the hand with documented quantitative and qualitative variations. Thus an evaluation of the effectiveness of all techniques of manual lymph drainage to mobilize macromolecules can be

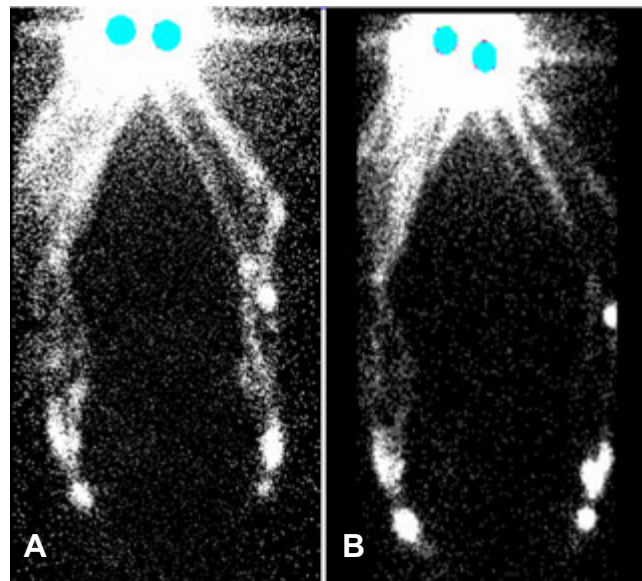


Figure 5. Lymphoscintigraphic image before (A) and after (B) a single manual passage in the limb using manual lymphatic therapy with linear movements indicated for primary lymphedema.



Figure 3. Auto lymphatic therapy technique using roller.

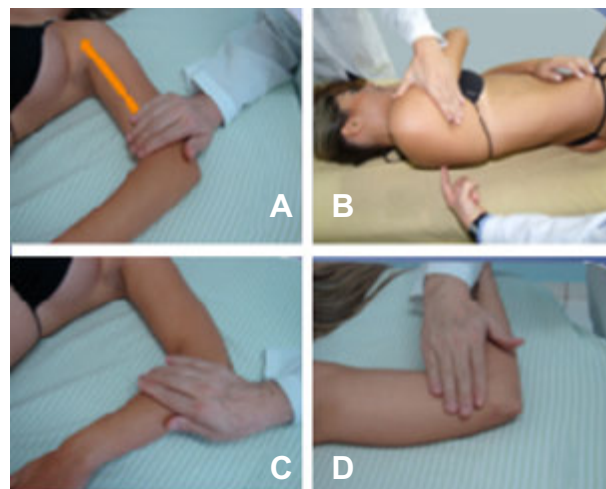


Figure 6. A-D) The adaptation of the technique with axillary lymph node resection after breast cancer, where linear movements in the cephalic and posterior (when patent) and intermittent compression therapy are performed in each limb.



Figure 4. Auto lymphatic therapy technique using linear manual movements.



Figure 7. Schematic linear pathways to be drained in the thorax in primary lymphedema using the Godoy & Godoy technique.

performed.<sup>11,12</sup> Some types of lymphedema associated with lymph node resection or with mechanical blockage of the lymphatics require an adaptation of the technique (Figures 6 and 7). This aspect has been evaluated in the most common types of cosmetic, reconstructive or oncologic surgery with adaptations being made for each pathophysiological process making these techniques safe in the preoperative recovery of both aesthetics and reconstructive surgeries.<sup>5</sup> The best example here is breast cancer treatment-related lymphedema. In this case a specific technique for chest and arm lymphedema was developed using intermittent compression therapy (ICT).

Thus, five main variants of the drainage techniques have been described over the years: i) manual lymph drainage using rollers; ii) self-applied manual lymph drainage using rollers; iii) manual lymph drainage using the hands (manual lymphatic therapy); iv) mechanical lymphatic therapy using the RAGodoy® device; v) lymphatic therapy after breast cancer treatment using ICT.

Lymphoscintigraphic, volumetry and bioimpedance analyses were made for both arms and legs. The minimum duration of a lymphatic therapy session in order to observe a significant change in volume is one hour.

## Conclusions

In brief, a continuous relentless evolution of lymphatic therapy techniques

has been observed in recent years with the aim of improving the treatment of patients.

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