Belgian Society of Lymphology OPEN DEBATES

Some subjects in the field of lymphology remain "widely" open and subject to debate (sometimes heated). We can certainly respond with letters to the editor of the journals that published them, but with answers that often do not cover all the problems raised.

Discussion of the results of MLDs and ICG fluorescence imaging for lymphatics

This debate article revolves around the various publications by Prof Bourgeois (MD) and the team around Prof. Devoogdt (PT)

Topics of debate:

Through their repeated publications since the introduction of their protocol (1), the team around Prof. Devoogdt is the promoters and heralds of various messages that are sometimes a little too simplistic in my opinion.

Their message and conclusions: “Manual Lymphatic Drainages (MLD) have been compared in three groups of patients with Breast Cancer Related Lymphedema (BCRL), one group A with one fluoroscopy-guided MLD -also said “new”- to one group B with a traditional MLD and to one group C with a “placebo” MLD. They did not observe any difference between their three groups, particularly in terms of volume reduction (observed after an intensive 3-week treatment and after 6 months of maintenance treatment) and concluded that these MLDs did not add value even in the case of fluoro-guidance (3).”

The debate revolves around, focuses on, touches on several problematic subjects-axis that I propose to address in this article and the following

Axis A: "Lympho-fluoroscopic guidance is useless for MLD"

OR

About the interest of ICG Near-Infra-Red Fluorescence Lymphatic Imaging (ICG-NIRLI) in patients with Breast Cancer Related Lymphedema (BRCL) especially for the lympho-fluoroscopic guidance of Manual Lymphatic Drainages ?

a) as a scientist, I would agree with this conclusion of their works if there had been one control group with MLD but without the use of ICG NIRFLI and this is not the case with their work

We take up here the first of the questions raised by their study and that we had addressed to the authors (2):

« … the authors wish to compare (one group) A (with) the fluoroscopy-guided MLD -also said “new”- to (one group) B (with) a traditional MLD and to (one group) C (with) a “placebo” MLD”

but with the following concern

“*their protocol will not allow any valuable conclusion. Indeed if results in group A are better than results in group B and/or C, would it be because their “new” MLD is better than the “traditional” one (without any guidance in both groups) AND/OR because guidance of any MLD by lympho-fluoroscopy improves any MLD based (“blind”) on classical anatomy?*

To answer these questions, the protocol would have had to compare the following four groups: A with their “new” MLD guided by lympho-fluoroscopy, B with their “new” MLD but without lympho-fluoroscopic guidance, C with their “traditional” MLD guided by lympho-fluoroscopy and D with their “traditional” MLD but without lympho-fluoroscopic guidance.”

In fact, all their study(-ies) and result(s) are potentially biased by an a priori, i.e. :"the injection of the ICG has no influence on their results" (which we dispute and will discuss in our next interventions)

b) As a scientist, I agree with their conclusion, but **only for a generally regarded population** and without further reflection.

As an "old" doctor who has worked in the field of oncology and more particularly in breast cancer, the situation reminds me of the time when chemotherapies appeared but whose effect on part of the population was linked to the menopause that it induced with the disappearance of oestrogen stimulation which was ultimately beneficial for the part of the population with tumours with oestrogen receptors,

c) As a scientist and specialist in the imaging of the lymphatic system, I do not agree or only partially agree (without being biased) with this simplifying conclusion.

Lymphofluoroscopy gives only an image of the superficial network and that is already a lot. But it does not give images, information on all the axillary pathways and other deep collateralization pathways, and this is its big limitation in front of and for our understanding of patients with situations as complex as lymphedema and in this case these big arms can represent.

d) in view of this limitation of lympho-fluoroscopy mentioned in the previous point, we can as scientists and doctors ask ourselves different questions that the authors do not address or/and to which these authors do not provide answers (and for some, answers exist in the literature) (ref), i.e.;

- in the case of these big arms, do these patients with preserved axillary pathways (not seen in lympho-fluoroscopy) represent a favourable group and possibly better responders than the others to MLD?

- the superficial collateral pathways are (also) present in only a (small) part of these patients and this raises three questions;

a) Is their presence "favourable-useful", does it have an "added value" if-when performing lympho-fluorocopically guided MLD?

b) Does an MLD (whatever it may be) contribute to their appearance(s) with a favourable outcome? and

c) Knowing their presence (by imaging), does their stimulation by MLD (among others) have a positive effect on these big arms?

In conclusions (here):

if habits are to be changed and a paradigmatic shift in physiotherapist's habits reached, it is not a discourse rejecting MLD that should be held but rather by working on the other hand to:
- a better understanding and knowledge of the indications for MLD,
- a better selection of patients who can benefit from it and
- one analysis of the results so obtained.

And this rather than applying to them all BCRL patients and in a "blind" way admittedly simple treatments such as presso-therapy or bandages that push the interstitial fluids towards the capillary space, into the lymphatics towards the root of the limb... where, moreover, only the hands

of the physiotherapists can adapt to the anatomy of the patients and act on the superficial lymphatics.
But this requires physiotherapists more time and sweat in their own physical investment...

Prof Pierre Bourgeois, MD, PhD

1) De Vrieze T, Vos L, Gebruers N, Tjalma WAA, Thomis S, Neven P, Nevelsteen I, De Groef A, Vandermeeren L, Belgrado JP, Devoogdt N. Protocol of a randomised controlled trial regarding the effectiveness of fluoroscopy-guided manual lymph drainage for the treatment of breast cancer-related lymphoedema (EFforT-BCRL trial). Eur J Obstet Gynecol Reprod Biol. 2018 Feb;221:177-188. doi: 10.1016/j.ejogrb.2017.12.023. Epub 2017 Dec 16.
2) Bourgeois P. About the EFforT-BCRL-trial.. Eur J Obstet Gynecol Reprod Biol. 2018 Oct;229:200. doi: 10.1016/j.ejogrb.2018.07.012. Epub 2018 Jul 11.
3) De Vrieze T, Gebruers N, Nevelsteen I, Fieuws S, Thomis S, De Groef A, Tjalma WA, Belgrado JP, Vandermeeren L, Monten C, Hanssens M, Devoogdt N. Manual lymphatic drainage with or without fluoroscopy guidance did not substantially improve the effect of decongestive lymphatic therapy in people with breast cancer-related lymphoedema (EFforT-BCRL trial): a multicentre randomised trial. J Physiother. 2022 Apr;68(2):110-122. doi: 10.1016/j.jphys.2022.03.010. Epub 2022 Apr 12.
4) Ferrandez JC, Laroche JP, Serin D, Felix-Faure C, Vinot JM. [Lymphoscintigraphic aspects of the effects of manual lymphatic drainage]. J Mal Vasc. 1996;21(5):283-9.
5) Medina-Rodríguez ME, de-la-Casa-Almeida M, Martel-Almeida E, Ojeda-Cárdenes A, Medrano-Sánchez EM. Visualization of Accessory Lymphatic Pathways, before and after Manual Drainage, in Secondary Upper Limb Lymphedema Using Indocyanine Green Lymphography. J Clin Med. 2019 Nov 8;8(11):1917. doi: 10.3390/jcm8111917.