

Management of Lymphoedema of the Breast

Background Information

Mrs B, a 68 year old woman had been diagnosed with Grade 2, oestrogen-receptor positive left breast cancer at a routine mammogram in 2016. She underwent Wide Local Excision (WLE) and Axillary Node Clearance (ANC). Thirteen Lymph nodes were removed and two were positive for cancer.

Following surgery and after wound healing, she underwent fifteen fractions of radiotherapy to the chest wall and affected quadrant. She is now being treated with Letrozole (hormone therapy drug) and reviewed by her oncologist at six monthly intervals.

Post operatively, Mrs. B developed seromas (pockets of fluid that build up under the surface of the skin) in the affected breast. These were drained seven times by needle aspiration. Following radiotherapy, she developed a cellulitis infection in the breast and had a two-week course of antibiotics.

Patient Referral

At this stage, Mrs. B's Breast Care nurse referred her to the Mary Ann Evans Hospice Lymphoedema Service www.maryannevans.org.uk/lymphoedema-care/ where assessment took place within two weeks.

Physical Examination

On examination, the affected left breast was pink and warm to the touch. She did not have systemic symptoms of infection. The breast skin was dimpled, with 'peau d'orange' appearance. The subcutis was firm to the lower quadrants,

and she experienced moderate to severe transient breast pain. The breast shape was distorted and presented as early stage radiotherapy induced morphea. This rare but disfiguring side effect of radiotherapy is very difficult to treat. Over time tissues can become hardened, retracted, more discoloured and increasingly painful.

Soft oedema was palpable to the posterior axilla, sub-scapular area. Limb volume measurements were taken and showed a 3.4% difference between affected left and non-affected R dominant arm. There was no palpable oedema to the limb.

Mrs. B is a non-smoker; she had a BMI of 30 but was fairly active. She was keen to resume swimming and a supervised gym routine using resistance machines. She was quite low in mood due to the pain and embarrassed by the appearance of her breast. She wore looser fit tops to disguise the breast shape.

Initial treatment plan

1. Advice was given on skin care
2. Self Lymphatic Drainage Massage and shoulder mobilization exercises were taught, with instruction to carry out twice daily.
3. MLD weekly, in clinic. (NB: distance meant it was not feasible to carry out more than one MLD treatment a week)
4. Kinesiology Taping - providing there was no sensitivity on patch testing
5. Use of a supportive 'sports bra'
6. Use of 'Foam' breast pads, made by clinical team

Mrs B. had eight weekly MLD sessions,

during which breast tissue began to soften slightly. Low Level Infrared Light Therapy (LLLT) was introduced: 12 fortnightly sessions were carried out

LLLT treatment protocol

Duration: 10 minutes Frequency: 2.5 Hz

Directed on lower quadrants and supraclavicular region after emptying of lymph nodes. Taping was discontinued initially, MLD continued after LLLT treatments sessions had stopped.

Initial Outcome

Gradually breast pain began to improve but did not fully resolve. Skin improved, becoming more supple and pliant. Lower quadrants improved during treatment but became firmer again as days between appointments passed. Mrs. B was by now attending a gym three times a week using gentle resistance machines and swimming once a week. Unfortunately Mrs B. developed cellulitis again, which caused the breast to become firm and tender. This was treated with a 2-week course of antibiotics.

In October 2017, the clinic trialed the Hivamat 200 Deep Oscillation Therapy (DOT) and Mrs B was keen to try this; she had five treatments in total at fortnightly intervals.

Frequency: 200 Hz Mode: 5 Duration: 20 minutes

During treatment, the therapist worked over the right axillary lymph nodes to encourage emptying and then worked



A practitioner applies deep oscillation to breast via vinyl gloves, which transmit intermittent electrostatic impulses to the tissue, creating a resonant vibration in the tissue layer that reduces swelling, fibrosis and pain

directionally, encouraging superficial lymph flow towards the right axilla and away from the swollen areas and into deeper drainage pathways. We worked anteriorly and posteriorly.

While working with MLD, the therapist can feel subtle changes in tissue tone. When using DOT, therapists noted that these changes occurred more quickly and with even lighter pressures than MLD alone.

Half way through this course, Mrs B sustained a soft tissue injury to the breast making it very painful to touch. However, with DOT we were able to treat without causing any discomfort, and by the 4th DOT treatment the affected breast was visibly softer. Even deeper tissues were softening and the breast was regaining a more natural shape.

Patient Feedback

Mrs. B is delighted with the results. Her breast pain has resolved and she can now wear close fitting clothes without worrying about her shape. She is now confident and walks more upright.

She is brighter in mood and beginning to enjoy life again. She writes, "The PhysioPod Deep Oscillation is brilliant. My symptoms have improved. My breast is now soft and I have no pain or soreness. I was sceptical at first, but it worked first time. So keep up the good work and thank you again."

Therapist Conclusion:

"I have worked in Lymphoedema management for twenty years and have treated many patients with breast lymphoedema, including several with radiotherapy-induced morphea. DOT achieved deeper tissue changes which MLD and combined treatments had not and it achieved the changes faster and more gently than MLD alone. In 2009, I attended a presentation of the following study at The BLS Conference in Belfast and was pleased to witness that these findings echoed those of the following study:

"Effect of treatment with low-intensity and extremely low-frequency electrostatic fields (deep oscillation*) on breast tissue and pain in patients with secondary

“ The PhysioPod Deep Oscillation is brilliant. My symptoms are much improved. My breast is now soft and I have no pain or soreness. I was sceptical at first, but it worked first time. So keep up the good work and thank you again. ”

CASE STUDY

breast lymphoedema”, by Silke Jahr, Birgit Schoppe and Anett Reissbauer From the Department of Physical Medicine and Rehabilitation, Charité-Universitätsmedizin Berlin, Germany. J Rehabil Med 2008; 40: 645–650 www.ncbi.nlm.nih.gov/pubmed/19020698

Please note this case study is summarized

in a patient-friendly version prepared for Compare All Care entitled “Understanding Lymphoedema and Managing it” Written by Sue Hansard, Mary Ann Evans Hospice and First Lymph Care & Dr Jens Reinhold, Physiomed Elektromedizin AG. The article can be located at https://www.compare-all-care.co.uk/expert_articles/understanding-lymphoedema-and-managing-it-53



ABOUT SUE HANSARD
LYMPHOEDEMA NURSE SPECIALIST

Sue Hansard gained her BA in Nursing and R.G.N Qualification in 1982. During her varied career she has worked in surgery, orthopaedics, medicine, elderly care, renal dialysis and day surgery. She moved into palliative care in 1996 and has worked in lymphoedema management since 1998.

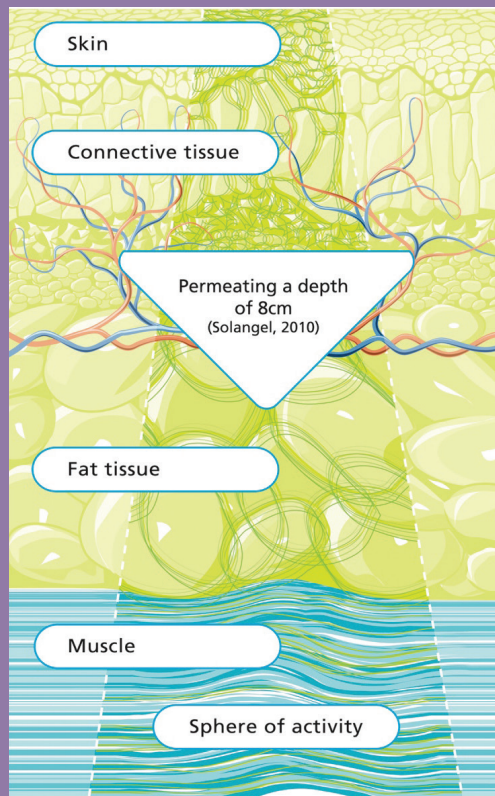
Sue founded 'First Lymph Care' in 2003 to make MLD available to all; especially those with lymphoedema, or skin sensitivities, which are sometimes contraindicated for other forms of massage. Sue's nursing knowledge and experience gives her clients confidence and assurance that treatments are always appropriate for their condition and safe.

Sue is registered with the NMC and fully insured to practice independently. She always takes a thorough medical history prior to any treatment planning. Through 'First Lymph Care' Sue provides a complete holistic approach to her clients, providing general health care advice and support for people living with lymphoedema to help them manage their condition. She writes and produces her own Fact Sheets, is a Peer Reviewer for L.S.N. (Lymphoedema Support Network) and freelance medical writer. Raising awareness of the many benefits for all, of both MLD and Indian Head Massage, and managing Lymphoedema specifically is a key purpose of 'First Lymph Care'.

Sue also delivers teaching sessions on Lymphoedema and its management to small groups of Allied Health professionals as part of their Continuing Professional Development. On site workshops can be especially beneficial for teams in Care Homes and Care Agencies, whose clients may need assistance with compression garments and skin care. Sue can equip teams with knowledge and practical skills to underpin their care.

Deep oscillation refers to an electromechanical therapy method in which electrostatic attraction and friction, produced by the use of a glove or hand-held applicator, create resonance vibrations in treated tissue.

In contrast to other therapies deep oscillation has a gentle and deep-acting effect on all tissue components to a depth of 8cm (Solangel, 2010) through skin, connective tissue, subcutaneous fat, muscles, blood and lymph vessels. Lifting and release of tissue speed is dependent on frequency used – 5Hz – 5 times per second – 250 Hz – 250 times per second. Contraindications are the same as normal massage, plus pregnancy and pacemaker.



Because of the non-invasive, non-traumatic nature of this modality, there are very early possibilities of application: following injury and from Day One post operatively, in acute pain and in wound healing, also. As no pressure is required to deliver the therapy, the practitioners hands are protected.

Deep oscillation has been successfully applied therapeutically for more than two decades and concomitantly examined scientifically with respect to its tissue effects and clinical results. Currently there exists a substantial number of RCTs, pilot studies, case studies, field reports and studies (several in PubMed-indexed international journals) to provide a medical evidence base for deep oscillation. To read more on evidence please visit <https://www.physiomed.de/en/products/deep-oscillation-evident-clinics/#bibliography>