

CASE STUDY 10/05/19 Patient number 0001

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## Data from 4 consecutive treatments of Reflexology Lymph Drainage RLD : Lower Limb Secondary Lymphoedema LLSL.

### Aim:

**To assess the effectiveness of RLD protocol (1) for a cancer patient with secondary lower limb lymphoedema.**

### Background :

The British Lymphology Society (BLS) describes lymphoedema as a condition that occurs when the lymphatic system function of regulating fluid balance in tissue spaces fails. Creating an imbalance between capillary filtration into and lymphatic drainage from the interstitial space. Chronic oedema or lymphoedema are interchangeable terms used to describe a group of conditions characterised by the presence of swelling within the tissues of the body lasting more than three months. Oedema or swelling can occur anywhere in the body such as midline structures head and neck, trunk, breast or genitalia but most commonly affects the limbs. Lymphoedema is categorized as Primary or Secondary. Secondary lymphoedema of the upper limb is a recognised side effect of breast cancer treatment. A review in 2013 (2) concluded that this condition is estimated to affect 1-5 breast cancer survivors. Lower extremity lymphoedema is a complication of cancer treatment with surgery or radiotherapy being the commonest cause (3). Lymphoedema typically occurs after extended node dissection with additional radiation therapy. (4) Which has not been thoroughly studied in prostate cancer. However, Lymphoedema following treatment for gynecological cancer has been studied in more detail. The prevalence has been reported to be about 10-20% after pelvic lymph node removal but with large variations between different cancer sites (4.5.). Reporting that the majority of lymphoedema occurs during the first year after treatment (5). There are many treatment modalities for lymphoedema namely skin care, exercise, compression, manual lymphatic drainage, light therapy, intermittent compression pumps, medical taping psychosocial management. The precise form of management programme required would be determined by the site, stage, severity and the complexity of the lymphoedema and the patients' psychosocial situation. The current standard of care is complete congestive therapy (CDT) (6) CDT is an intensive stage of treatment that lasts for 3-4 weeks where the patient attends clinic for skin care manual lymphatic drainage, compression bandaging and exercise. After this intensive stage the patient would move to the maintenance stage using compression garments self-massage and exercise. However, best practice would include a holistic and multidisciplinary approach (7).

### Purpose:

A Reflexology Lymphatic Drainage RLD study 2016 (1) concluded that RLD may be efficacious in reducing the volume of lymphoedema in the arm and in reducing patient-identified concerns. Although the RLD protocol included treatment for Lower Limb Secondary Lymphoedema LLSL no study was conducted to evaluate the safety and effectiveness of the protocol with male and female patients affected by LLSL. The findings from a current study found that routine prescription of class two graduated compression stockings after inguinal lymph node dissection should be questioned and alternative prevention strategies should be considered (8). A Clinical Reflexology Audit 2015 carried out with NHS Cancer ward and chemotherapy patients found that clinical foot reflexology reduced lower leg and foot swelling (lymphoedema) (9) A patient survey ( 2018 NHS DCHFT Cancer Service ) identified LLSL as a concern that affected body image, QoL and mobility.

The following case study examines the use of RLD with lower limb secondary lymphoedema LLSL.

1.

Patient 0001 ( dob 15/02/1951) is a retired female College HR Manager diagnosed with endometrial cancer Nov 2016. NHS treatment included full Hysterectomy, Chemotherapy, Radiotherapy and Brachytherapy. Delivered first standard reflexology treatment 28/04/17 ( at reflexologist’s clinic ) to help with lymphoedema of the right leg, numbness of the R knee ( suspected outcome of leg clamping during surgery ) sleep issues and general wellbeing. Successive treatments were reported by the patient to be both therapeutic and beneficial. Following the reflexologist completion of RLD training Mrs A was approached as a candidate for this case study. With an explanation and evidence given to both Mrs A and her NHS DCHFT Lymphoedema Specialist Nurse, Mrs A agreed and was consented.

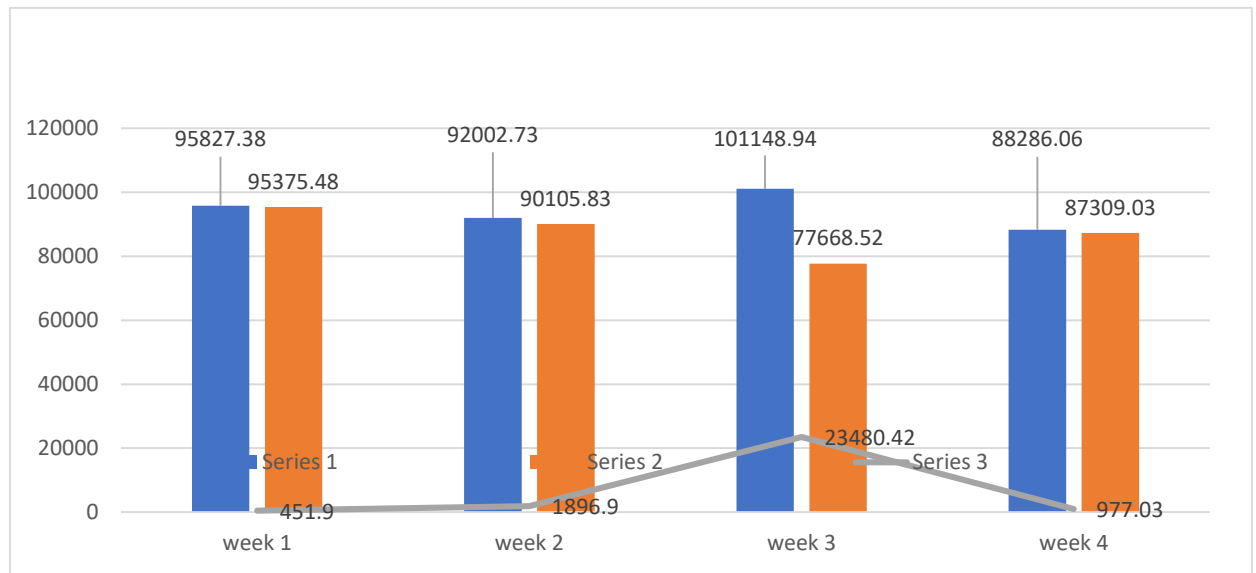
**Method:**

This study is a case study based on the RLD protocol delivered weekly over four weeks to a female cancer patient with secondary lymphoedema of the right leg. At the private clinic of the reflexologist. Adhering to the protocol as set out in the original study (1) of 40mins of stimulation to “mapped” specific areas on both feet. Pressure was applied in a set sequence to the specific reflex areas believed to correspond to the lymphatic and renal systems of the body. Firstly, on the foot of the non-affected “good” leg then repeated on the foot of the “affected” leg and finally returned and repeated on the foot of the “good” leg. Measurements were taken pre and post RLD treatment and recorded by the reflexologist. Data was collected via Measure Yourself Concerns and Wellbeing MYCAW (10 ) and Limb Volume Circumferential Measurement LVCM (11.12..) currently used within the NHS. LVCM Formula to gain the volume of the limb. (V= multiply the circumference (taken at 4cm intervals) by itself and divide by 3.142 (pi))

**Data:**

Indications from data are that changes occurred in the volume of the affected leg post each RLD treatment. Fig 1. Also indicating a trend that RLD treatment may produce a cumulative effect. Each week pre- treatment measurements showed a decreased volume. Exception week 3 however this did show the greatest decrease in volume post RLD. Some difficulty was experienced in obtaining and ensuring integrity of the measurements at each week highlighting the necessity for clinical involvement and the expertise of lymphoedema nurses in the process to eliminate bias and reduce the risk of measurement errors.

Fig 1.



Series 1= Volume of right leg pre RLD Series 2= Volume of right leg post RLD Series 3= Difference Series 1 and 2

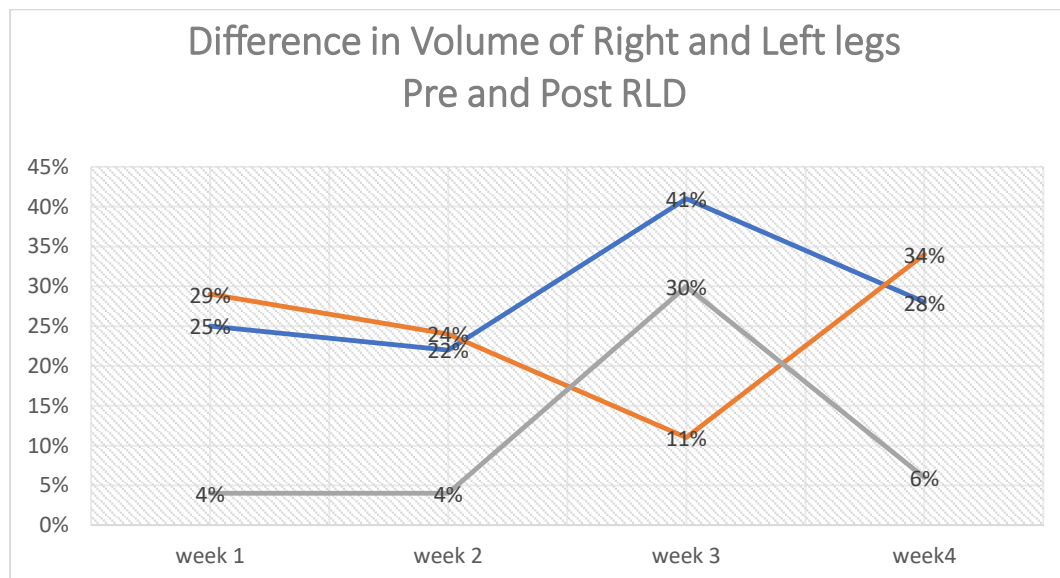
Quantitative data analysis followed the formula used in original research protocol (1) The difference between the volumes of the **swollen leg** and normal leg were expressed as a **percentage** of the normal leg ( the normal leg acted as a control ) Fig 2.

Left = "normal" leg

**Right = lymphoedema leg**

|                   | Pre-RLD   |          | Post RLD  |          |
|-------------------|-----------|----------|-----------|----------|
| Total limb volume | Right     | Left     | Right     | Left     |
| Week 1            | 95827.38  | 76521.38 | 95375.48  | 73766.51 |
| Difference R+L    | 11757.29  | 25%      | 21608.91  | 29%      |
| Week 2.           | 92002.73  | 75193.23 | 90105.83  | 72470.17 |
| Difference R+L    | 16809.5   | 22%      | 17635.66  | 24%      |
| Week 3            | 101148.94 | 71561.65 | 77668.52  | 70043.99 |
| Difference R+L    | 29587.29  | 41%      | 07624.53  | 11%      |
| Week 4            | 88286.06  | 68975.32 | 873090.03 | 64948.97 |
| Difference R+L    | 19310.74  | 28%      | 22360.86  | 34%      |

Fig 2.



Series 1 = % of R to L leg volume Pre RLD. Series 2 = % of R to L leg volume Post RLD.

Series 3 = Value of change in volume %

Mycaw data showed a drop post RLD from 6 ( baseline high) to 4 ( follow-up low) for main concern which was lymphoedema.

Wellbeing scores dropped from 5 ( baseline high) as bad as it could be to 1 (follow-up low) as good as it could be at the end of the 4 week trial.

Patient feedback was positive “The leg/ankle much more supple and leg feels lighter”.

Patient reported outcomes:-

After treatment 1

(26/03/19) the improvement lasted 4 days. Gardening-bending of knee triggered swelling.

After treatment 2

(2/04/19) improvement lasted 5 days. No discomfort

After treatment 3

(9/04/19) no feelings of tingling or tightness in the leg. Thurs (2 days after treatment) felt so well went on a long walk Fri pm (3 days after treatment ) started to tighten.

After treatment 4

(16/04/19) immediate feedback, leg felt less heavy and swollen.

Follow-up feedback via email (26/04/19) *My leg didn't feel 'heavy ' until Sunday evening ( 5days after treatment ). I think that was my own fault because I wore new shoes and I don't think they are wide enough so my foot did swell plus it was very hot and I sat with my leg down as we were at a bbq.*

*Overall it certainly makes the leg much more comfortable and feels lighter. Definitely recommend it.*

#### Conclusions:

The impact this condition has on patient quality of life can be profound. A swollen leg affects body image, restricts choice of clothing and footwear and inhibits mobility. The ability to move and take appropriate exercise is shown to be beneficial in lymphoedema symptom management and is well published as beneficial to overall wellbeing. Mrs A commented on her increased mobility following RLD treatment. Her weekly reported feedback following RLD highlighted improvements in physical leg symptoms of discomfort, swelling, heaviness, tightening, tingling and mobility.

Whilst findings from this case study show a significant improvement in the patients’ perception of symptoms and wellbeing and indicate some change in right leg volume following 4 consecutive RLD treatments. To ascertain if this method may be clinically effective, have a cumulative effect and to gauge the duration of the changes requires further investigation. This case study provides evidence to support further clinical study.\*

\*To avoid bias and error, consistent accurate measuring of the affected leg to be carried out by clinical staff in future studies.

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### RLD : A Practitioners Perspective.

My background, briefly, as a second generation Complementary Practitioner spans over 30yrs and a range of modalities supported by a substantial body of evidenced training. My aim is to offer patients a professional holistic approach to symptom and condition management by up-grading my knowledge and skills. Keeping abreast of new research and evidenced techniques, to enable me to work confidently as a Complementary Practitioner in the private sector and within the NHS. I have delivered Clinical Reflexology to cancer patients and patients with life limiting conditions in a hospice and the community in a voluntary capacity as part of a specialist palliative care team for 7yrs. From 2014, funded by a local charity I have developed and delivered a Clinical Reflexology service ( at three sites- ward, chemotherapy unit and radiotherapy clinic) in a UK NHS hospital. 2019 funding has been secured for me to develop the “Fortuneswell Complementary Therapy Service” within Dorset County Hospital Foundation Trust Cancer Service with Clinical Reflexology at it’s core.

Evidence gathered from these experiences shaped my perception of existing symptom management for NHS cancer patients from diagnosis through treatment and beyond. I have identified areas for cancer service development in secondary care to include complementary therapies and produced a Complementary Therapy governance policy and procedure document formatted (to meet NHS DCHFT criteria ) to provide a working framework for the service. It includes provision of annual audit supported by patient survey data, and feedback from clinical staff. Areas of innovation to include trials of patient requested therapies to provide choice and help with symptom management.

From 2014, 3,000 patient data from delivery of clinical reflexology at DCHFT has consistently shown lymphoedema (swelling ) of the legs and feet identified by cancer patients as one of the main concerns affecting physical and emotional wellbeing, thereby impacting on QoL.

By completing Sally Kay’s RLD evidenced training I have gained a deeper insight into lymphoedema and acquired skills to enable me to deliver an effective treatment. By conducting this case study I have been able to witness first hand the changes brought about by delivery of the RLD protocol. I have been made aware of the potential benefits this advanced form of reflexology may provide for both female and male patients and would like to explore this further. This case study has raised interest within the hospital cancer service and the lymphoedema clinical team.

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