Dr Vodder's Manual Lymph Drainage (MLD) Reduces Peripheral Neural Deficits in a Patient Using a Walking Frame

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Background

Compression of the median nerve as it passes through the carpal tunnel can have a number of causes including swelling from fluid retention such as during pregnancy or repetitive exercise such as typing. Symptoms include paraesthesia in the thumb and first two fingers and the lateral half of the third finger and progressive loss of coordination and strength in the muscles of the thenar eminence, leading to an inability to oppose the thumb and a loss of fine motor movements. The most common treatment currently is partial or complete surgical division of the flexor retinaculum (fascial release).[1]

History

A female client AM, 50 years old with a history of transverse myelitis resulting from para-neoplastic syndrome associated with low grade non-Hodgkin's lymphoma was referred to the Lymphoedema Assessment Clinic where she was assessed as having bilateral leg lymphoedema. A course of reduction treatment was successfully undertaken and compression garments fitted.

During treatment AM commented on the problems she was experiencing with her hands. The lateral myelitis had affected her ability to lift the front portion of her foot during walking and AM was dependant on a walking frame to maintain her mobility. The progressive weakness in her legs means she must lean heavily on the walker handles (Photo 1). The pressure this creates through the base of the hands had produced carpal tunnel like symptoms, worse in the left hand and she was having increasing difficulty in walking any distance without wrist pain.

The usual fascial release surgery was not an option for AM as a general anaesthetic was considered unsafe given her other medical conditions. She had seen a Neurologist who had advised her that the continued use of the walker her neural function would most likely continue to deteriorate.

I have had some previous success treating carpal tunnel syndrome using the Vodder method of MLD. This modality offers orthopaedic techniques which stimulate deep drainage of joint and muscle structures.[2] I discussed this treatment with AM who agreed to a course of therapy with the aim of alleviating symptoms. The view of the Neurologist was that the treatments couldn't hurt but the best she could expect was to slow the progression of neural deficits.

Photo 1:
Pressure through the base of the palm when leaning on the walker caused compression of the median nerve at the carpal tunnel.

Treatment

5 treatments were applied over a 4 month period beginning with fortnightly (3) then monthly (2) sessions. Each session consisted of application of basic MLD to the neck, shoulder and arm followed by deep drainage of the elbow, wrist and hand. The deep drainage technique consists of:

1. Firm palpation to locate painful structures and pockets of inflammation
2. Basic MLD techniques applied intensively over the target areas until a change is felt in the tissues
3. Firm palpation to retest the area and establish a reduction in pain has occurred
4. If pain is still present the basic MLD continues until a change has occurred in the level of pain experienced at that site (on palpation)

A short stretch bandage was applied to the wrist and maintained in place for 2 – 4 hours after the treatment session. The bandage was not worn overnight (Photo 2).

Photo 2:
A short stretch bandage was applied after each treatment and maintained for 2 – 4 hours before removal.

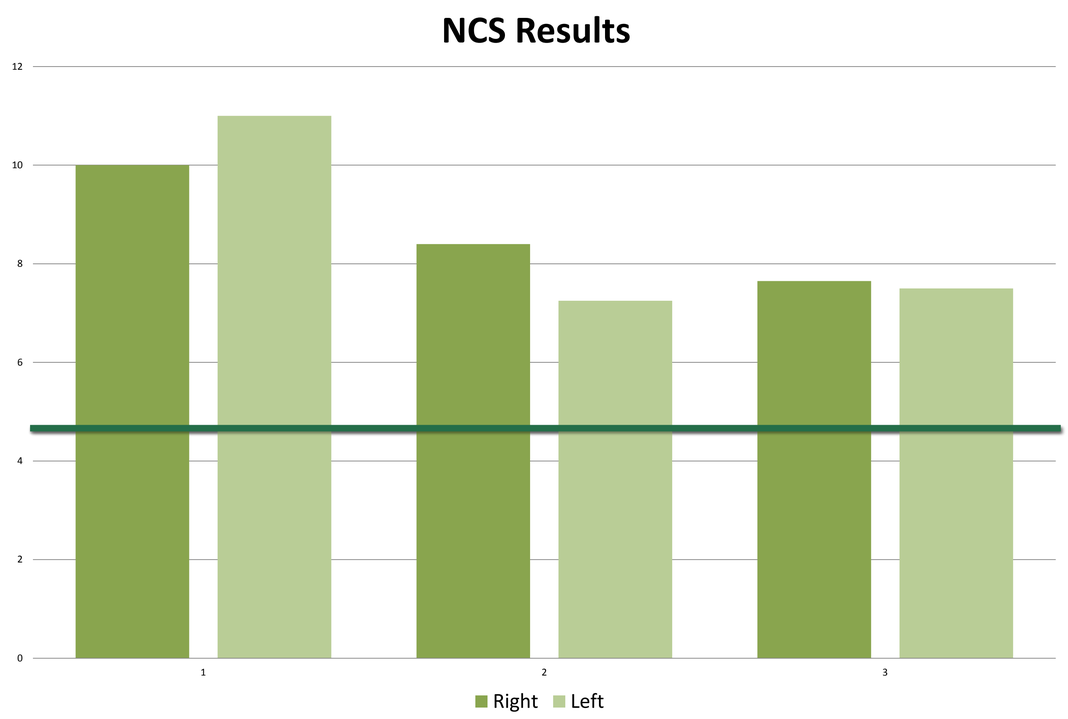
Objective Measurement

A Neural Conduction Study (NCS), which measures the time taken for nerve transmission to occur at a local site such as the wrist, can indicate when neural function is slowed or inhibited. The test is performed by placing electrodes on the skin and passing a small electrical charge into the nerve. The time taken for the nerve to conduct the charge over a set distance indicates the level of dysfunction in nerve transmission.

This study had been performed by the Neurologist prior to the first treatment. Further test were then conducted after the 3rd and 4 weeks after the 5th treatments - a total of 3 tests over 5 months.

Results

The first NCS showed significant reduction in median nerve conduction at the wrists. A normal test score is 4.5 and AM had measured 11 on the left and 10 on the right. Subsequent tests showed an improvement in neural function during the treatment period which was maintained until the last NCS which was 4 weeks after the last treatment. Results of the NCS are presented in Graph 1.



Graph 1: Neural Conduction Study results. Column 1 shows the results from the initial NCS taken before treatment started, Column 2 is after the 3rd MLD treatment and column 3 shows the results of the final NCS 4 weeks after the 5th treatment. The horizontal bar represents NCS results in a normally functioning median nerve.

Discussion

The clear improvement in neural conduction is most likely the result of reducing any excess fluid in the carpal tunnel. However reduction of inflammation in the skeletal muscles of the forearm and their attachments could also relieve any impact this has on medial nerve function distal to the inflammation.

Usually a treatment protocol of weekly sessions would be ideal so to achieve results with only 5 sessions over a 4 month period is a better outcome than would normally be expected.

Conclusion

This single case study is a clear example of the role of the lymphatic system in reducing inflammation and allowing proper tissue function, not just in the skin and subcutaneous compartment but throughout the deeper tissues as well.

This and other cases of carpal tunnel successfully treated with MLD indicate a need for research into the deeper drainage techniques offered by the Vodder method. This relatively pain free, conservative modality could potentially be an effective treatment for this common condition, resulting in fewer surgical interventions being required.

Specialised training is required to develop the palpation skills necessary to locate the correct treatment area without causing unnecessary pain for the client and the circular movements of MLD are then applied at the correct level to drain these deeper structures rather than the superficial tissues. It is unlikely that these results would be achieved by application of simple lymphatic effleurage techniques, however this remains to be tested clinically.

References

1. Clinically Oriented Anatomy 4th Ed, Moore KL & Dalley AF. Lippincott, Williams and Wilkins
2. Textbook of Dr Vodder's MLD A Practical Guide, Wittlinger 2011. Georg Theime Verlag

Conflict of Interest:

Jan Douglass is an accredited Vodder Schools International Instructor