

Oedema Management in Spinal Cord Injury

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INTRODUCTION AND BACKGROUND INFORMATION

Spinal cord injury (SCI) patients are prone to the development of chronic oedema due to gravitational influences on dependent limbs, reduced mobility and therefore reduced muscle pump action.

In 2010, a collaborative Clinic commenced between the Occupational Therapy department at the National Spinal Injuries Centre and Lymphoedema Service at Florence Nightingale Hospice, to address this problem and challenge entrenched views of this being an acceptable and inevitable consequence of SCI.

CORNERSTONES OF OEDEMA MANAGEMENT

SKIN CARE

This is of paramount importance and involves:

- basic hygiene
- foot care
- checking for sores & pressure points
- catheter & splint straps which can restrict drainage and cause pitting oedema

BEFORE



Conventional leg bag straps

AFTER



Urisleeve spreads pressure

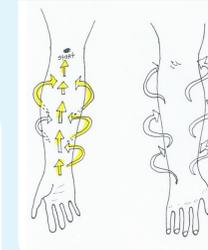
EXERCISE

- calf pump, arm, shoulder and hand exercises
- passive and/or active
- use of Theraband or Leg Lifters
- elevation
- positioning



MASSAGE

- very light pressure
- simple lymphatic drainage
- skin brushing
- stretching



COMPRESSION



a. Short stretch multilayer bandaging



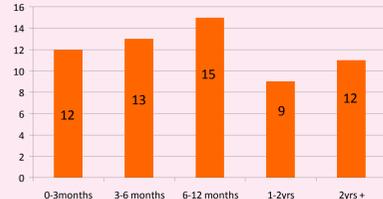
b. Hosiery - MUST be correctly measured & fitted
NB. Garments used in project:
• Haddenham Healthcare Veni and Star Cotton Class 1 leg garments
• Haddenham Healthcare Microfine gloves and Class 1 arm sleeves

OUTCOMES

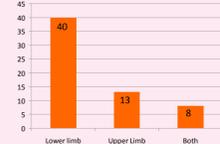
STATISTICS (from audit - 2012)

- NSIC patients
- 61 referrals since 2010
- 39 In patients
- 23 Out patients

DURATION OF OEDEMA



DIAGNOSIS



NUMBER OF REFERRALS



MEASUREMENTS & BENEFITS

AVERAGE REDUCTION

Foot Circumference (cm)	Ankle Circumference (cm)	Calf Circumference (cm)
1 - 2 (max 4)	1 - 3 cm (max 5)	2 - 3 (max 10)

PATIENT FEEDBACK

"I can get my shoes on"
"I can lift my leg independently"
"I can wear shoes I haven't been able to wear for years!"
"Transfers are so much easier!"
"I can wear my skinny jeans again!"
"Happy! Happy!"

FURTHER BENEFITS

- Reduction in pain
- Healing of wounds
- Reduction in weight of leg
- Reduction in size of leg
- Greater joint and lower limb mobility
- Improved transfers
- Choice of footwear
- Aesthetic appearance
- NB + Fluid output

THE WAY AHEAD

TRAINING

- In-service training carried out in 2011
 - OT, spinal out patients
- Internal taping course for NSIC staff carried out in 2011
 - 2 nurses
 - 2 lymphoedema nurses
 - 4 physios
 - 4 OTs
- External taping course carried out in 2012
 - 10 lymphoedema nurses
 - 4 OTs from NSIC

KINESIO TAPING

- Used on hands & feet & has potential for muscle support
- Lifts skin, allows fluid drainage
- Relieves pain-reduces pressure on nerve pathways



FURTHER DEVELOPMENT

- Whose responsibility?
- Interdisciplinary team or specialist role?
- Competencies
- Training, education & support for staff and patients of NSIC
- Patient Advice booklets
- Hosiery - stock control, budget, ordering, storage etc
- Development of designated clinic time for assessment & follow up in Spinal Out Patients department
- Awareness: skincare, exercise, elevation

NB Is it more harmful to do something, or do nothing?

TESTIMONIALS

TESTIMONIAL ONE

I've now been paralysed for nearly 50 years and for the past 20 have had problems with excessive swelling in my legs. I tried commercially produced flight socks, keeping my legs elevated and even diuretics but with little success. Over the past few years my legs also began to look unhealthy and my skin turned dark brown. A year ago my spinal consultant referred me to the lymphoedema clinic and I have been seeing Sue Lawrance ever since.

My legs are now looking as healthy as they have ever done since I became paralysed. All the swelling has disappeared and the discolouration has also faded. My legs are now much easier for me or my personal assistants to handle when dressing, bathing or using the toilet. I can now wear fashionable shoes again and I am looking forward to wearing my black patent leather ones at my son's wedding - shoes that I haven't managed to get on for many years.

TESTIMONIAL TWO

For many years following my SCI my feet and lower legs had been fine and were only prone to severe swelling on long-haul flights but over the last few years my feet had taken to turning purple as soon as I got out of bed in the morning and would swell up as the day progressed. The swelling was so severe in the summer months that I took to wearing 'crocs' as I couldn't find anything else that would fit and even these were tight to remove at the end of the day. I was also very aware that my feet looked abnormal in colour so would do all I could to hide them away under long-skirts or trousers, and was reluctant to let anyone, even healthcare professionals, see them.

Having been measured and equipped with the correct size knee-length socks by Sue I couldn't believe how quickly the swelling went down in my legs and feet. The skin no longer looked taut and fragile and the colour was always a healthy pink at the end of the day. They were also much lighter to lift when transferring which wasn't a benefit I had expected as I hadn't realised how much heavier they had become over time.

I can now buy shoes from normal shoe shops and no longer worry that the skin may breakdown just for having my feet down all day.

MAKING THE DIFFERENCE

Oedema Management is a simple intervention with simple outcome measures which demonstrate an immediate and effective improvement in health, well-being, independence, self-esteem, mood and quality of life.