

Lymphoedema bandaging for the head, breast and genitalia

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Anatomical areas such as the head, breast and genitalia are difficult to bandage. Patients often have to learn how to self-bandage and need a high level of support from clinicians. It is of paramount importance that the clinician gains practical experience and has a sound theoretical understanding of wound care, skin care and the materials used for compression therapy. In the absence of literature and robust data surrounding the topic, this paper offers practical guidance on the compression techniques used.

INTRODUCTION

Compression bandaging can be used as part of decongestive lymphatic therapy to manage lymphoedema in awkward anatomical areas such as the head, breast and genitalia. In Germany most of these patients are initially decongested in specialised lymphology clinics as it may be necessary for them to receive several treatments each day if the condition is particularly severe. In most other European countries they are traditionally treated as outpatients¹. Although effective bandaging of these areas can be difficult, patients often need to be able to apply or reapply the bandages so clinicians have a vital role in providing reliable support. This requires a sophisticated level of sensitivity and sound knowledge of the pathophysiology of lymphoedema and associated disease processes.

BANDAGING THE HEAD AND FACIAL AREA

Pronounced head, neck, facial and cervical lymphoedema is a common complication of cancer of the ear, nose and throat. Oedema can also develop in other areas, particularly in the floor of the mouth and the cheeks. Surgery and subsequent radiotherapy are usually contributing factors as secondary tissue changes in the irradiated field can cause radiation dermatitis and radiogenic fibrosis.

A feeling of constriction due to the oedema and possibly fibrosclerosis in the irradiated field can result in compromised mobility throughout the cervical spine region and in the pectoral girdle. Very often the sheer number of problems associated with the disease and its treatment lead to severe depression and psychosocial isolation².

Compression therapy has the potential to significantly reduce oedema. In addition, the micromassage effect of the foam padding may help to soften any radiogenic fibrosis that can be present³. The compression dressing technique described below is relatively easy for patients to manage and is generally comfortable and well tolerated.

PRACTICAL APPLICATION Bandaging the head and facial area

- To prevent or minimise the risk of chronic lymphoedema, compression therapy should begin as soon as possible after surgery or on identification of the first signs of lymphoedematous swelling.
- Compression therapy in the head and facial region must be applied gently and low pressures must be used to prevent paraesthesia or bruising in irradiated regions.
- The neck itself must never be involved in the compression process.
- A knitted tubular bandage is cut into a strip 12-16cm wide, folded in half and then placed in position before the insertion of the foam padding layer (Fig 1).
- To prevent chafing and capillary damage the edges of all pieces of foam are trimmed at an angle of 45 degrees.
- The padding is placed within (check) the tubular bandage. To ensure that hygiene is maintained the piece of foam is always covered by a tubular bandage.
- It is possible to increase localised pressure by placing several layers of foam on top of one another^{4,5}.
- Depending on how pronounced the facial oedema is, the floor of the mouth, the lower jaw, large areas of the cheeks and the upper lip as far as the cheekbone can also be gently compressed (Fig 2).
- Custom-made compression hosiery with Velcro fastenings can be used in the maintenance phase of treatment (Fig 3).



FIGURE 1



FIGURE 2



FIGURE 3



FIGURE 4 Secondary lymphoedema of the left breast and arm

COMPRESSION OF THE BREASTS

Cancer is the most common condition associated with lymphoedema of the breast. Breast conservation surgery is being performed with increasing frequency and often involves partial or total removal of the axillary lymph nodes^{3,6}. Radiotherapy is also an increasingly integral part of treatment with the result that, in addition to the more familiar secondary arm lymphoedemas, secondary lymphoedemas of the breast are becoming more common^{3,6}(Fig 4). Ongoing manual lymphatic drainage, which stimulates the lymphatic anastomoses that lead to the healthy axillary lymph nodes on the unoperated side of the body and to the inguinal lymph nodes on the same side of the body, remains the mainstay of treatment. However, it may be useful to provide mild compression of the lymphoedematous and often fibrotic breast.

PRACTICAL APPLICATION Compression of the breast

- A soft piece of thick foam (1.5–2.5cm) should be cut into a cup shape and the interior surface pared down to create a corrugated surface. Alternatively, a commercially available foam pad can be used (Fig 5). In addition to increasing the degree of compression, this helps to provide a micromassage effect that gently squeezes the fibrosis (Fig 6). A properly fitted support bra is imperative to secure the foam padding in place.
- The foam padding must be inserted in such a way as to reach as far as underneath the armpit and to overlap the edges of the bra cup, as it is here in particular that lymph drainage can be impeded by a tourniquet effect (Fig 7). Care must also be taken to protect and pad under the shoulder straps.
- To protect the skin and enhance comfort, the interior surface of the foam should be covered with wide strips of a thin, non-occlusive fixing tape.



FIGURE 5

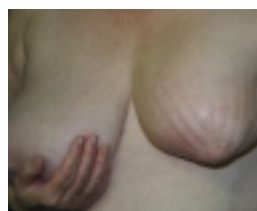


FIGURE 6

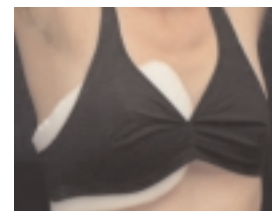


FIGURE 7

ETHICAL CONSIDERATIONS

- Clinicians are legally obliged to inform boys with primary genital lymphoedema that long-term compression and elevated temperatures in the testicles can result in fertility problems
- Written consent to treatment is required
- The provision of counselling and appropriate advice on sexual health is mandatory

BANDAGING THE GENITALIA

All patients with genital lymphoedema should be treated at a specialised lymphology clinic in the first phase of decongestive lymphatic therapy. If this is not possible they should be treated as outpatients at least once or twice daily for several weeks. Manual lymphatic drainage is an important part of treatment for genital lymphoedema.

Males

Therapy should begin with a low level of compression and, depending on the severity of the condition and response to treatment, be increased in consultation with the patient. It is essential that patients (or their carers/parents) learn self-bandaging skills because excess fluid can rapidly accumulate in the external genitalia if treatment is interrupted.

Maintenance therapy will be required in many cases, and commercially available scrotal and penile dressings may be used to enable a return to normal life. After successful decongestion, in consultation with the lymphologist, it may be advisable to surgically remove superfluous scrotal skin to reduce the risk of infection and oedema reformation in the flaccid tissue.

Females

The treatment of genital lymphoedema in females is more complex. A custom-made anatomically contoured foam panel at least 1cm thick can usually be used to apply adequate pressure in the oedematous, and possibly also fibrotic, region of the mons pubis and the labia. This should be covered with a tubular bandage and removable panty liner to keep the foam clean by preventing it from coming into direct contact with the skin. The gusset of the foam panel should be trimmed so that it does not impede walking.

Compression is achieved through the use of a tailored pair of compression shorts or flat-knit compression hosiery into which the foam panel is inserted. The pressure can be increased by

Pictures supplied courtesy of: Lymphologic®; Dr med R Stroßenreuther; Sana Derm Bad Mergentheim, Dipl Phys T Künzel

PRACTICAL APPLICATION Bandaging the male genitalia

- For mild to moderate lymphoedema, elastic gauze (check) bandages usually provide adequate local pressure. These must be applied with gentle to moderate stretching force and with respect for the limits of their elasticity.
- The dressing is applied in stages (Figs 8-10) and usually only the foremost part of the penile dressing is detachable to allow for urination.
- In pronounced lymphoedema, the penis and scrotum are also padded with pieces of foam 3-4cm thick, which are applied cylindrically. These should be lined with soft surgical tape to enable even the highest pressures exerted by the elastic gauze bandage layer to be evenly distributed.
- In the scrotal region, cohesive bandages are used because they prevent slippage and pinching of the skin.
- Even the most severely congested mons pubis can be included in treatment through the use of an anatomically contoured piece of foam at least 2cm thick, with fenestrations over the hypogastrium (Fig 10), or a pair of compression shorts.



FIGURE 8 First stage of scrotal dressing with cohesive bandage



FIGURE 9 Protective tubular bandage

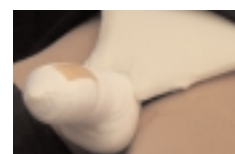


FIGURE 10 Foam padding and anatomically contoured panel

layering several foam panels. Extra foam cubes or self-adhesive strips can be attached to the inside of the first foam layer in the area of the mons pubis to aid the softening of fibrotic tissue.

In the maintenance and optimisation phase, commercially available compression stockings with local padding enable the patient to resume daily activities.

Wound care

The lymph system plays an important role in the body's immune response so patients with lymphoedema are vulnerable to infection. Those with head, breast and genital lymphoedema are often further compromised as a result of disease, surgery and/or radiotherapy so scrupulous skin care is essential to reduce the risk of infection⁹.

Before beginning the first phase of treatment, a strict hygiene routine must be introduced. This is particularly important in patients with lymphoedema of the genitalia as they are at increased risk of erysipelas. Cellulitis and fungal infections are common in this patient group, especially in men with scrotal oedema. Special consideration should also be given to the lymphocysts and lymphocutaneous fistulas that are common in this part of the body, both before and during decongestive lymphatic therapy. Laser therapy can be used to treat these complications. Women with recurrent vulval carcinoma who have had inguinal node dissection may have a fungating lesion in the groin requiring complex management⁷.

An ongoing reduction in oedema is essential to prevent additional wound healing disorders and the often fatal infections associated with them^{3,4,8}.

CONCLUSION

As a result, self-treatment acquires a high priority and the patient must be familiar with and efficient in self-bandaging techniques¹. Clinicians have a professional responsibility to ensure they are equipped with appropriate technical skills and knowledge of the available products and materials to offer guidance in achieving effective compression in these complex anatomical areas.

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