

How should we manage patients with chronic oedema?

Chronic oedema may affect any part of the body but is commonly seen in the limbs, particularly the legs. It can be due to several causes, so 'chronic oedema' is a broad term referring to swelling that has been present for at least three months. This condition has been shown to be more common than originally thought. It is at least as prevalent as leg ulceration, and its prevalence increases in older age groups (Moffatt et al, 2003).

Many patients with chronic oedema are being seen in the community with care being provided by community practitioners. In older patients the cause of chronic oedema can be complex and can result in several management dilemmas for community nurses.

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I. A recent population study has identified chronic oedema as being an under-recognised problem in the community. Why is chronic oedema often missed in patients?

DD: The problem with its recognition partly lies with its definition and measurement. There is no universally accepted definition of chronic oedema, and its causes are not well understood. Consensus of expert opinion defines it simply as swelling which has been present for more than three months (Moffatt et al, 2003). It is often overlooked as a symptom as it can occur together with various other long-standing conditions such as heart or renal disease, hypothyroidism, chronic venous insufficiency, chronic skin conditions and recurrent cellulitis in a limb.

Chronic oedema is more prevalent in older groups (Lymphoedema Framework, 2006) and some degree of swelling may be more accepted as a normal part of ageing. Additionally, identification can be more difficult in obese patients, or where oedema occurs above the knee, in the sacrum, genitalia or abdomen. Where chronic oedema exists it is important to identify and treat its underlying cause. During routine assessment the clinician should consider whether the patient has swelling or symptoms of swelling. If swelling has been present for more than three months, the patient should have a comprehensive medical and lymphoedema assessment.

TH: Chronic oedema in patients is often under-recognised due to lack of knowledge and understanding by healthcare professionals. Many GPs have

believed that nothing could be done for these patients and so they ignored the symptoms, leaving the patients untreated. Lymphoedema training for doctors has only been introduced in the last few years — many GPs have been in practice for more than 20 years and have not had regular updates. In Enfield we have tried over the past 11 years to educate healthcare professionals within the primary care trust. Many clinicians have been receptive to our training but some will still not refer patients. Although our caseload is increasing and more healthcare professionals are referring from the community, we still see many patients at our clinic who have been mismanaged and prescribed diuretics to try and reduce their chronic oedema. Things are now changing and the patients themselves are now self-diagnosing using the internet and the Lymphoedema Support Network.

FW: Chronic oedema is a symptom of a variety of aetiologies and as such requires an accurate assessment to discern the underlying cause. The impact of oedema on someone's life can be completely underestimated because the focus of care may be on an existing comorbidity. Practitioners may also ignore swelling where it is having a minimal impact on the individual. Thus it is not until oedema becomes problematic that care is considered.

Avoiding oedema assessment and management may be linked to confusion or indecision about how to manage the oedema, beliefs about the type of oedema present and whether any intervention can be effective. Chronic oedema may therefore be a

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relatively common condition which is paradoxically poorly recognised and understood and so is often missed. Collecting incidence figures in patient populations has become an important tool for determining the extent of the problem.

2. Leg dependency reduces movement of fluid out of the limb and often contributes to the development of chronic oedema and delayed wound healing. What level of elevation is effective in overcoming the effects of limb dependency?

DD: Dependency syndrome (continuous immobility in the sitting position) is often encountered in the community, where it contributes to the development of chronic oedema. The volume of tissue fluid varies considerably due to hydrostatic effects. Leg elevation is often advocated as part of a number of interventions to overcome the negative effects of gravity on the lower limb. When the legs are elevated to hip level, venous flow is enhanced and the volume of fluid is decreased. Venous flow is highest in the supine position, with elevation to heart level being most effective. Below heart level venous flow velocity is reduced and the effect of gravity is not effectively overcome enough to positively reduce swelling. In practice many patients may be unable to elevate their legs to a high enough level when sitting in an ordinary chair.

It is important to ensure that the patient goes to bed at night so that the legs are appropriately elevated. Recliners, if available, are of benefit when used, or resting in the afternoon in bed can also be effective. Elevating

the legs while sitting on a settee can also be helpful. For patients who find it difficult to achieve the required level of leg elevation, any comfortable level of elevation will be preferable to complete limb dependency. It must, however, be noted that the therapeutic effect will be minimal.

TH: It is recommended that for elevation to be beneficial, the swollen limbs should be raised to the level of the heart. Legs should not be raised higher than the head, as this will not allow adequate drainage. Supporting the legs with cushions or on a bed would be advisable, rather than using a chair and stool, as this will give full leg support.

FW: Leg elevation above the level of the heart is advocated as an effective way of promoting venous return. However, some patients are unable to adopt this position. The challenge is more often related to encouraging patients to go to bed. Reclining chairs may be offered as a compromise but where they provide insufficient limb elevation, dependent swelling is unlikely to be managed so effectively. Similarly sitting out with legs elevated on stools will be more therapeutic if the stool is at a sufficient height. Compression therapy can of course be used in conjunction with elevation and together will offer a more comprehensive regimen.

3. Is elevation without compression worth doing?

DD: Compression reduces chronic oedema by physical means.

It promotes lymph flow during movement and shifts fluid from the congested extremity into a non-compressed part of the body. Leg elevation is very effective in reducing oedema, but only after three to four hours (Xia et al, 2004). Pain, discomfort or an inability to keep the legs elevated for long periods makes this impractical for many individuals. Any volume reduction attained by elevation is therefore not sustained when the limbs are dependent without additional support to counteract the effects of gravity. Leg elevation results in a significant reduction of ankle circumference when the oedema is mainly soft and pitting (Perlau et al, 1995). Chronic oedema caused by cardiac insufficiency, chronic venous insufficiency or lymphoedema is often not reduced with elevation alone. In these circumstances the oedema is mainly firm (non-pitting), and compression is required to control swelling and to break down fibrosclerotic tissue (EWMA, 2005). Thus successful management of chronic oedema depends on the cause and type of oedema. The gains from leg elevation alone are usually transient, but the use and level of compression will be affected by several factors which include comorbidities and vascular status of the legs, as well as patient comfort and choice.

TH: We would always recommend that patients use compression with elevation but we understand that not all patients can tolerate compression — especially older people who have limited manual dexterity. Many of these patients do not go to bed as they find it difficult to get in and

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out and we work closely with an occupational therapist to provide aids to help patients to get into bed. In this group of patients we do recommend elevation as long as their legs are well supported. We also recommend that they go to bed sometime during the day as well as at night. Patients should ideally have their limb elevated at the same level as their heart. We also encourage good skin care and offer advice about what to do should an infection occur.

FW: The usefulness of limb elevation is dependent upon the underlying cause of the chronic swelling and how established it has become. Where the oedema is soft and pitting and/or there are daily fluctuations in the amount of oedema present in the limb, then oedema reduction will also be more sensitive to limb elevation. In these instances a patient on bed rest would have a good response to elevation without compression. However, in the absence of compression, oedema will return when the limb becomes dependent again.

When tissues become fibrosed with thickened skin and non-pitting oedema producing distortion in limb shape, the reduction in oedema will not be achieved with limb elevation. These patients will need compression to reduce their swelling.

It is noteworthy that any limb elevation should be balanced with maintaining patient mobility.

4. In patients with reduced mobility and ankle function, can ankle exercises have any effect on improving their condition,

and what should we be teaching patients to do?

DD: Contraction of skeletal muscle enhances movement of fluid. The ankle joint and calf pump are the driving forces for the return of fluid from the lower extremity. Pain and discomfort may cause immobilisation of the limb, particularly if a wound is present, resulting in the ankle becoming fixed and giving rise to a loss of calf muscle function. The aim of ankle exercises is therefore to limit oedema, and improve gait and the range of movement of the ankle joint to maintain calf muscle function. Mobilisation, particularly walking, has a positive influence and generally improves the circulation in the lower limb. Patients should be encouraged to remain as active as possible and be supported to participate in the management of this aspect of their care.

TH: Within our area of practice we do highly recommend that patients carry out regular gentle ankle exercises which help to stimulate the superficial lymphatics. For lymph flow to be effective it depends on the muscle working like a pump to encourage drainage and prevent pooling. For older people and patients with reduced mobility this is more difficult for them to achieve, but we do still encourage them to do simple ankle and foot exercises.

FW: Immobility is a significant factor in the development of lower limb oedema, so ankle exercises will certainly have a beneficial effect. Ankle exercises such as flexion and

dorsi-flexion are important methods in encouraging venous return and lymphatic drainage. Patients should be taught exercises to improve the range of motion at the ankle and be encouraged to do these daily. Leg exercises using Therabands will also help promote calf muscle pump action. Even movement of the toes where an inelastic bandage system is in place will offer a degree of working pressure. Exercises need to be related to the individual and where possible should aim to develop or maintain the existing functional ability.

Simple ankle exercises should include:

- ▶▶ Repeated dorsi and plantar flexion — pointing foot to floor and bringing it back as far as it will go.
- ▶▶ Rotation of feet — circular movements with pointed toe clockwise and anti-clockwise.

These should be taught and the individual's technique periodically checked. The preferred option would be to observe the gait and to encourage a good heel-to-toe action while mobilising in supportive footwear.

5. There are patients with chronic oedema who may require intervention by more skilled practitioners in line with what is considered best practice for management of the condition. Community nurses may at times have nowhere locally to access such skills. How should practitioners seek to manage these situations?

DD: The Lymphoedema Support Network together with the Lymphoedema Framework Project have identified the lack of

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provision of services and inequitable access to care for people with lymphoedema. A collaborative and consensus approach has been used to produce National Standards of Practice for lymphoedema services and internationally-agreed guidelines for lymphoedema management (Lymphoedema Framework, 2006). Practitioners should be using evidence-based guidelines where they exist to provide safe and best practice. Clinical governance provides the framework for this, and puts the onus on healthcare trusts to ensure patients' safety and to support their staff to provide the appropriate standard of care. Clinicians should therefore use local and existing guidelines to make a case to access appropriate treatment for patients in their care. Support may also be obtained by liaising with more clinically experienced colleagues or deferring to community matrons who have responsibility for overseeing the management of long-term medical conditions. Areas of deficit should also be brought to the attention of clinical managers and appropriately documented.

TH: Community nurses should try to attend study days on chronic disease management. Many of the companies who supply compression garments and bandages will often provide free study sessions. The best practice document is an excellent guide for healthcare professionals. The British Lymphology Society website will provide more information on courses and other services available. Also there may be a neighbouring borough where you could get some advice or shadow a lymphoedema specialist.

FW: Community nurses need to understand the most common causes of chronic oedema so that accurate assessments and referrals can be made. Understanding different bandage and hosiery types, how they work and how to apply them will offer practitioners a selection from which to choose. Having education on compression is essential so courses, study days, journal articles and guidelines should be available to all practitioners. The Lymphoedema Framework is also a great resource.

Building up expertise within a team is important. Chronic oedema responds to informed consistent management. When a patient is seen by different practitioners using a variety of compression therapy styles and regimens the outcome is also likely to be variable. Clinicians need to work with patients to set measurable outcomes which can be used to inform future care and use local inter-professional collaboration to build a more comprehensive care structure.

6. How can we best manage chronic oedema in very obese patients?

TH: Managing chronic oedema in obese patients is a challenge in the community. It is important to be realistic about the goals that you will be able to achieve. The most important aspect of education for this patient group is skin care and treating all infections promptly, as this will prevent their condition from deteriorating. We always give exercise and elevation advice and we also give advice about weight loss, when appropriate.

FW: Managing oedema in obese patients can be extremely complex and successful management must be linked to the individual while also targeting obesity issues. A multidisciplinary approach is often required. The type of oedema present needs to be discerned; whether lipoedema, lymphoedema, lymphovenous oedema or a combination. Compression management of the lower limbs will be helpful where lymphoedema is present but will have limited value with lipoedema. However, compression is certainly not the only solution. Exercise regimens, referral to obesity clinics, appropriate diets, advice on aids to living, home adaptations, analgesia and psychosocial support may all be necessary. Plastic surgery may also be an option for some patients. What makes the care complex is that it must be designed for the individual patient with realistic goals and coordinated different components. Community nurses can help to facilitate this process while offering comprehensive pain assessments, skin care and compression therapy. **WUK**

References

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