Understanding lymphoedema in older people

Lymphoedema is three times more common in older people than in younger people. Many people who have lymphoedema are not diagnosed and only 64% of people with this distressing condition receive treatment (Moffatt et al, 2003).

Lymphoedema in older people can coexist with other conditions, such as immobility that leads to oedema (Williams, 2003). Lymphoedema can be difficult to diagnose and treat in older people and can impair an individual's quality of life.

This article aims to enable you to understand why older people develop lymphoedema, to recognize it and to enable you to work with others to treat it effectively.

What is lymphoedema?
Lymphoedema is the abnormal collection of fluid in the interstitial spaces (King, 2006). Figure 1 shows some typical cases of lymphoedema in the legs.

Normally, the heart pumps powerfully and high capillary pressure causes 20–30 litres of plasma a day to leak from the capillaries. This becomes interstitial fluid. The lymphatic system drains this interstitial fluid and returns it to the cardiovascular system (Stanton, 2000).

Lymphoedema occurs when the lymphatic system is damaged or is unable to drain fluid from the interstitial spaces. There are two types of lymphoedema:

- Primary lymphoedema is caused by an abnormality of the lymphatic system. This may be present at birth (lymphoedema congenita), develop from the ages of 2–35 years (lymphoedema praecox) or develop after 35 years (lymphoedema tarda).
- Secondary lymphoedema develops because of damage to the lymphatic system (Williams, 2003). This may be a result of cancer treatment, which can involve the removal or irradiation of lymph nodes. It can also develop because of trauma, infection or disease – research suggests that this type of lymphoedema may affect significant numbers of older people (Lymphoedema Framework, 2002) (Box 1).

There are many causes of leg oedema in older people. These include:
- Cardiac failure (Coady, 2002)
- A low serum albumen
- Problems with venous drainage
- Pulmonary hypertension
- Renal failure (Hardy and Taylor, 1999).

It is important to investigate causes of oedema in older people so that effective treatment can be provided (Blankfield et al, 1998).

Box 1.

CAUSES OF SECONDARY LYMPHOEDEMA (BLANKFIELD ET AL, 1998)

- Cancers, such as cervical and prostate, causing lymphatic blockage
- Trauma to lymphatic system such as injury and repair of fractured neck of femur or after deep vein thrombosis
- Disease such as joint disease and venous disease
- Infection and inflammation such as chronic leg ulceration or cellulitis
- Parasitic infection (filariasis).

Linda Nazarko aims to enable you to understand why older people develop lymphoedema, to recognize it and to enable you to work with others to treat it effectively.

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Clinical features
It can be difficult to distinguish lymphoedema from oedema caused by other diseases. In the early stages, lymphoedema seems to be like simple oedema: when you press the oedematous skin, it pits; when the leg is elevated, the oedema may improve.

As lymphoedema progresses and fluid becomes established in the interstitial tissues, clinical features change. The oedema does not pit on finger pressure and it is not relieved by elevation. The leg begins to lose its shape (Stanton, 2000; King, 2006). Table 1 indicates the clinical features of lymphoedema.

How can it be treated?
Lymphoedema is a chronic condition and people with this condition require lifelong treatment (Bianchi and Todd, 2000). There are two main components to treatment: treatment of lymphoedema and care of the skin to avoid complications.

The aim of lymphoedema treatment is to enable fluid to drain from the interstitial spaces. Fluid can be forced from the interstitial spaces back into the lymphatic system by using compression or lymphatic drainage. Sometimes, both techniques are combined. Lymphatic drainage is a form of gentle massage that encourages fluid from the oedematous area to areas of the body where it can drain normally (Linnitt, 2005).

Compression therapy
Compression therapy is used to reduce swelling and to prevent swelling from recurring. Research indicates that the most effective way to use compression is to begin with compression bandaging to reduce limb size, and then to maintain the limb using compression therapy (Badger et al, 2004).

Compression therapy is hazardous in people who have a poor arterial blood supply to the leg (Nazarko, 2005). Normally, assessment is carried out using a handheld Doppler ultrasound. This is not advisable in people with suspected lymphoedema. Some specialists fear that the inflating the sphygmomanometer cuff around the leg can worsen lymphoedema (King, 2006).

Usually, the leg is so swollen that it is not possible to hear the pulse signal. In such circumstances, specialist techniques such as pulse oximetry may be used (Cooper, 2005). If it is safe to do so, compression bandaging is applied by nurses trained in its use. When the limb regains normal shape and fluid is forced out of the interstitial spaces, compression bandaging is discontinued. This is usually after 4-14 days of treatment.

A compression garment is then used. Compression garments provide pressures that are higher than in normal compression stockings and are used for people with lymphoedema.

Lymphoedema compression stockings are much more acceptable to people than compression bandaging. They look like thick stockings and the person can wear shoes. The person wears the compression stocking during the day and removes it on retiring to bed.

In the past, compression stockings were specially made for individual patients. A new range of compression garments, including stockings, is now available on prescription (Figure 2). These are made by a company called Activa Healthcare (www.activahealthcare.co.uk). The stockings and arm sleeves should be replaced every 3 months after continual wear as they lose their stretch over time.

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Table 1. CLINICAL FEATURES OF LYMPHOEDEMA (STANTON, 2000; KING, 2006)

<table>
<thead>
<tr>
<th>Clinical feature</th>
<th>Details</th>
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<tbody>
<tr>
<td>Positive Stemmer’s sign</td>
<td>It is not possible to pinch a fold of skin at the root of the second toe</td>
</tr>
<tr>
<td>Oedema</td>
<td>More than 3 months duration, does not reduce completely on elevation</td>
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<tr>
<td>Fibrosis</td>
<td>Skin is hard and tight and does not pit because fibrous tissue has formed in interstitial space</td>
</tr>
<tr>
<td>Papillomatosis</td>
<td>The affected skin looks like cobblestones because of lymphatic dilatation and fibrous tissue formation</td>
</tr>
<tr>
<td>Hyperkeratosis</td>
<td>Skin is scaled and thickened</td>
</tr>
<tr>
<td>Lymphangio</td>
<td>Small blisters and bumps on the skin, which may burst and leak lymph fluid</td>
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<tr>
<td>Lymphorrhoea</td>
<td>Leaks of lymph fluid from the skin</td>
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</table>

Figure 2. NEW COMPRESSION GARMENTS FROM ACTIVA HEALTHCARE
Skin care
The person with lymphoedema is at risk of developing unhealthy skin. Skin can be easily damaged and can become infected. Skin care aims to reduce the risks of skin damage and infection. The skin should be inspected daily; this can be done before applying the compression stocking. If there are any blisters, redness, heat or scratches, the person should seek medical advice.

The skin should be moisturized each day to prevent dryness and cracking. The moisturizer used will depend on how dry the skin is. Some patients find aqueous creams effective, but if the skin is very dry, a mixture of 50:50 liquid paraffin and soft paraffin may be required.

Moisturizers should be applied at night. If they are applied in the morning, it makes the skin sticky and it is impossible to apply the compression stocking.

The person with lymphoedema of the leg should not walk around barefoot, as there is a risk of injury and infection.

Advice and treatment
Lymphoedema is a complex condition, especially in older people. If you suspect that someone you are caring for has lymphoedema, you should seek specialist advice.

Most primary care trusts have a tissue viability nurse specialist. If there is one in your area, you should make contact and ask for advice. The nurse specialist may have expertise in lymphoedema or may be able to obtain more specialist advice.

If your local primary care trust does not have a tissue viability specialist, contact the tissue viability nurse at the local hospital. Hospital-based tissue viability nurses do not visit people in care homes.

The hospital will have tissue viability clinics and may even have a specialist lymphoedema service. Care home residents are as entitled to use such services as any other person. The person’s GP must provide a referral letter so that the person can be seen in an outpatient tissue viability clinic.

Conclusion
Lymphoedema is an unrecognized and undertreated condition. It can cause great discomfort and can affect the older person’s quality of life. Swelling can make it difficult for a person to wear shoes or to move around. At its worst, the person with lymphoedema can be left with grossly swollen legs that leak lymph fluid.

Although lymphoedema can not be cured, it can often be successfully managed so that the person has a much improved quality of life. The registered nurse’s role in recognizing lymphoedema and in ensuring that older people in care homes access appropriate treatment is of crucial importance. RNC


Williams A (2003) The management of lymphoedema of the lower limbs. www.tyn.co.uk/journal.aspx/MonthNum=088&YearNum=2005&Ttype=hc&ArticleID=629 (accessed 04/06)

KEY POINTS

- Lymphoedema is three times more common in older people than in younger people.
- Many people with lymphoedema are not diagnosed and do not receive appropriate treatment.
- Lymphoedema is difficult to diagnose in older people, where it can coexist with other forms of edema.
- Nurses who are aware of the clinical features of lymphoedema can enable older people to access treatment.
- Standard treatment consists of compression therapy, which may be combined with lymphatic drainage.
- Skin care is vital to prevent infection and skin problems.

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