

LYMPHOEDEMA

guide for diagnosis and management
in general practice

What is lymphoedema?

- Chronic swelling of a body part (usually limbs) caused by the accumulation of fluid and protein in the tissue spaces arising from congenital malformation of the lymphatic system, or damage to lymphatic vessels and/or lymph nodes¹

Types of lymphoedema

Primary

- Caused by abnormal development of the lymphatic system
- May be present from birth ('congenital'), or develop in adolescence ('lymphoedema praecox') or middle age ('lymphoedema tarda')

★ ***In primary lymphoedema, often no triggering factor can be identified***

★ ***Consider primary lymphoedema as a differential diagnosis in patients with unexplained symptoms of limb swelling/morbidity***

Secondary

- Acquired following surgery, radiotherapy, trauma or other damage to the lymphatic system

★ ***Secondary lymphoedema can develop at any time after surgery or radiotherapy***

Mixed

- 'Mixed' lymphoedema describes lymphatic decompensation or failure associated with:
 - venous disease
 - lipoedema
 - obesity
 - immobility
 - chronic neurological disorders
 - skin grafting
 - vein stripping or harvesting
 - arthroscopy

Risk factors for developing lymphoedema²⁻⁴

- Any surgery (not just cancer surgery) where there is damage to the lymphatic system
- Radiotherapy to the lymphatic system
- History of infection in the affected limb/body part
- Injury or trauma to the lymphatic system
- Immobility
- Obesity
- Filariasis
- Genetic predisposition

Early warning signs of lymphoedema^{2,5}

- Transient swelling following exercise or physical activity
- Feelings of heaviness in the affected limb/body part
- Pain or tension in the affected limb/body part
- Tightness and fullness (a 'bursting' feeling) in the limb/body part
- Clothing or jewellery becoming tighter

★ ***Early warning signs can be present for three years or more prior to the development of swelling***

★ ***Intervention at this early stage can have a significant impact on reducing the risk of developing lymphoedema and the severity of lymphoedema if it does develop***

Lipoedema

- Lipoedema, which is caused by abnormal deposition of subcutaneous adipose tissue, can be misdiagnosed as lymphoedema⁶
- With lipoedema:
 - swelling is bilateral and generally does not involve the feet which distinguishes it from lymphoedema
 - there is pain on indent pressure and a tendency to bruise
 - it is almost exclusively restricted to women
 - patients can have mixed lipoedema/lymphoedema – oedema develops due to overloading of the functional capacity of the normal lymphatic system⁶

LYMPHO

guide for diagnosis and man

Physical evaluation

- Assess presence and severity of swelling by measuring circumference of affected limb(s) compared with unaffected limbs or pre-operative measurements using a tape measure
- Measurement forms can be downloaded from **www.lymphology.asn.au**
- Assess skin condition
 - dry
 - cracked
 - infection
 - bruising
- Assess subcutaneous tissue
 - pitting/non-pitting oedema
 - tissue tone
- Check for the presence of Stemmer's sign
 - thickened skin at the base of the 2nd toe indicates lymphoedema
- Weight and height (e.g. BMI)
- Cardiac and respiratory parameters
- Examination for presence of masses

Initial investigations

- Standard biochemical tests
 - FBC
 - U&E&CR
 - TFT
 - LFT
 - ESR
 - GTT for BMI > 35
- Chest X-ray
 - to exclude cardiac/respiratory causes of oedema
- CT scan
 - to exclude masses/tumours
- Duplex scan
 - to exclude venous insufficiency/DVT

General management principles

★ **Management principles for lymphoedema are primarily based on clinical consensus^{1,2,7}**

Management essentials

- Effective management can reduce symptom severity and improve quality of life
- Infection control is essential to reduce the risk of developing or exacerbating lymphoedema
- Acknowledging patient concerns and challenges of living with lymphoedema is important and should include practical and emotional aspects

Complex Decongestive Therapy

- Complex Decongestive Therapy (CDT) is the most effective management option^{8,9} and may include one or more of the following:¹⁰
 - education on care of the limb/body part including skin care to maintain a protective barrier against infection
 - physical exercises designed to improve lymphatic flow
 - Manual Lymphatic Drainage (MLD) (a specific type of massage) to improve lymphatic flow
 - compression bandaging/garment individually fitted by a lymphoedema practitioner (**N.B. not every patient will require compression bandaging/garment**)

Cautions

- It is important to note that diuretics are ineffective in lymphoedema³, while other medications may exacerbate the condition (e.g. anti-hypertensive agents, steroids, HRT, anti-inflammatory agents)
- Patients with existing lymphoedema who experience an exacerbation should be assessed for tumour recurrence or DVT and referred as appropriate

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Management in general practice

Specific management principles

Cellulitis

- People with lymphoedema are prone to recurrent episodes of cellulitis
- Advise bed rest and elevation of the affected limb/body part
- Use of compression garment can continue if comfortable and tolerated
- Urgent antibiotic treatment is essential to control the spread of infection (e.g. dicloxacillin/flucloxacillin 500 mg orally q6h for 7–10 days or clindamycin 450 mg orally q8h for patients allergic to penicillin)¹¹
- In cases of frequent recurrence, consider continuous prophylaxis (e.g. phenoxymethylpenicillin 250 mg orally bid for 6 months initially)¹¹
- Refer ALA Position Statement: Management of Cellulitis in Lymphoedema: http://lymphology.asn.au/new/documents/ALA_Position_Statement_Cellulitis_2010.pdf

Skin care

- Good skin care is essential to ensure healthy skin acts as a barrier to infection
- Patient should avoid constrictions (e.g. jewellery, tight clothes) to the affected limb/body part

Foot care

- Feet should be cleaned and dried daily
- Treat any infection/injury promptly
- Podiatry may be required

Clinical procedures

- Use non-affected arm/area of the body for injections, IV drips, BP readings and other clinical procedures
- Take care when excising skin lesions and using liquid nitrogen
- Exercise therapy is a cornerstone of management. Combinations of flexibility, resistance and

aerobic exercise may be beneficial in controlling lymphoedema.¹²

Weight control

- Weight management is essential as excess body weight may slow lymphatic flow

Overheating

- Advise patients that hot baths, spas and saunas may exacerbate swelling
- Patient should avoid strenuous activities (e.g. sport, gardening) in hot weather

Travel

- If the patient is planning air travel or a long-haul road or train trip (e.g. longer than 4 hours), they should seek advice from a lymphoedema practitioner before travelling

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The Lymphoedema Association of Queensland Inc. is a self-help organisation, founded in 1989, to provide information and education about lymphoedema, treatment programs and self-help to patients, health professionals and the wider community.

They offer

- Membership and support - active support groups Brisbane, Gold Coast, Sunshine Coast, Bundaberg, Mackay, Townsville
- Telephone contact and support Phone 07 3833 4376
- Information on lymphoedema and its treatment.
- Quarterly newsletter "Node News"
- Directory of Lymphoedema Treatment Facilities and Resources – downloadable from web.

Web: www.lymphqld.org Email: info@lymphqld.org

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DIAGNOSIS AND ASSESSMENT OF CHRONIC OEDEMA

Presenting symptoms in limb/body part

(one or more of the following, AND of chronic duration, i.e. > 3 months)

- Swelling
- Heaviness
- Pain or tension
- Tightness and fullness

HISTORY OF CANCER

Details of:

- Surgery
- Lymph node removal
- Radiotherapy
- Other surgery
- Complications (e.g. post-operative infection, etc)

Consider:

- Tumour recurrence
- DVT
- Cellulitis

ABSENT

Secondary Lymphoedema

Is there a recent exacerbation?

PRESENT

Investigate appropriately and refer back to patient's specialist

NO HISTORY OF CANCER

Exclude other causes of oedema:

- Mass (pelvic, abdominal, lymphadenopathy)
- Cardiac, renal or hepatic failure
- Thyroid disease
- Medication side-effects
- Venous insufficiency (including past DVT, chronic ulcers)
- Chronic neurological disorders
- Obesity
- Immobility
- Other surgery

In medical history, exclude the above and ask about:

- Trauma to limb
- Past cellulitis, infection, ulcers
- Travel history
- Family history of limb swelling

Perform full physical examination

Also assess degree of pitting, skin condition, presence of Stemmer's sign and record limb girth circumferences

Investigations

FBE, U&E&CR, TFT, LFT, CXR, ESR, BMI > 35 – GTT
Legs: Ultrasound or CT scan (abdomen, pelvis), venous duplex scan

Consider lymphoedema as differential diagnosis (either primary, secondary or mixed)

Refer to lymphoedema practitioner or clinic

for comprehensive assessment and management

For your nearest specialist practitioner or clinic contact:

Lymphoedema Association of Queensland – 07 3833 4376

Visit the website www.lymphqld.org – treatment facilities

Or the National Lymphoedema Practitioner's Register – www.nlpr.asn.au

N.B. Patients should be advised that some practitioners and clinics have waiting lists