

THE MANAGEMENT OF CELLULITIS IN LYMPHOEDEMA

*Dr Helen Mackie, Medical Advisor to the Australasian Lymphology Association
Approved by the ALA National Council June 2008; review June 2010*

Background

The following position statement has been developed by the Australasian Lymphology Association to provide an Australian perspective and nationally consistent principles on the management of cellulitis in lymphoedema. There are now several internationally published guidelines which are worthy of recognition within the Australian context.

This document was developed using the *Consensus Document on the Management of Cellulitis in Lymphoedema* British Lymphology Society 2006, and the *International Consensus Document on Best Practice for the Management of Lymphoedema* Lymphoedema Framework 2005, to be consistent with *Australian Antibiotic Therapeutic Guidelines Edition 13, 2006*.

Definition

Cellulitis presents with an acute spreading inflammation of the skin and subcutaneous tissues characterised by pain, swelling, warmth and erythema. It may be associated with lymphadenopathy, fever and systemic toxicity. Blistering of the skin may occur if the rash progresses.

The causative organism is almost always *Streptococcus pyogenes*. In wound associated cellulitis the causative organism may be *Staphylococcus aureus*.

Cellulitis in the lymphoedema affected area may be variable in presentation and may differ from classical cellulitis. Onset may be sudden over minutes or slow over weeks. Skin manifestation may be preceded by systemic symptoms. Prompt treatment is essential to avoid further damage to the lymphoedematous part which may predispose to repeated attacks.

MANAGEMENT

1. ACUTE CELLULITIS

The decision whether hospital admission is indicated should be assessed on the level of systemic upset:

- Signs of septicaemia – hypotension, tachycardia, severe pyrexia, confusion, tachypnoea or vomiting are absolute indicates for admission;
- Continuing or deteriorating systemic signs, with or without deteriorating local signs, after 48 hours of antibiotic treatment;
- Unresolved or deteriorating local signs with or without systemic signs despite adequate trials of first and second line antibiotics.

1.1 Management At Home

It is essential that the patient be closely monitored, ideally by the GP, to establish a baseline to monitor progress.

Record:

- Extent and severity of rash – if possible mark and date the border of the erythema;
- Level of systemic upset – pulse, temperature, rate of breathing etc;
- C Reactive Protein/Erythrocyte Sedimentation Rate/White cell count (WCC may not be elevated);
- Microbiology of any cuts or breaks in the skin before antibiotics are commenced.

Prescribe oral Phenoxymethylpenicillin 500mg 6 hourly (for patients over 100kg give 1G).

Prescribe Di/flucloxacillin 500mg 6 hourly if there is any evidence of *Staphylococcus aureus* infection, eg folliculitis, pus or dermatitis.

For patients hypersensitive to penicillin, prescribe Cephalexin 500mg 6 hourly.

For patients allergic to penicillin, prescribe Clindamycin 450mg 8 hourly.

If there is no response or a poor response (unresolved inflammation or development of systemic symptoms) to oral penicillin or Di/flucloxacillin after 48 hours, then Clindamycin 450mg 8 hourly should be substituted as the second line of oral treatment or hospital admission considered.

Antibiotics should be continued for not less than 14 days after a clinical response to treatment. It may take as long as 1-2 months to achieve complete resolution.

Bed rest and elevation of the affected part is essential. Ensure adequate general hydration.

Paracetamol or non-steroidal anti-inflammatory drugs (NSAIDs) may be taken as necessary.

Avoid/remove compression garments during the acute attack, but recommence usual compression as soon as the patient is tolerant of usual activity and compression.

If the swelling persists, manual lymphatic drainage and bandaging may be required to ensure compression garment fit.

1.2 Intravenous Home Based Therapy

If this is available for initial therapy prescribe:

- Cephazolin 2G IVI daily with Probenecid 1G oral daily
- OR**
- Cephazolin 2G IVI 12 hourly

A switch to oral Cephalexin 500mg 6 hourly should not be made before the temperature is normal for 48 hours, inflammation is much improved and C Reactive Protein is falling.

1.3 Antibiotics “In Case”

The risk of further attacks of cellulitis in lymphoedema is high. It is recommended that patients who have had an attack of cellulitis should carry a two-week supply of antibiotics with them, particularly when away from home for any length of time – prescribe

Di/flucloxacillin 500mg 6 hourly, or for those allergic to penicillin, Clindamycin 300mg 8 hourly.

Antibiotics should be commenced immediately familiar symptoms of cellulitis start, and a medical opinion should also be sought as soon as possible.

1.4 Antibiotics During Therapy

Patients undergoing intensive complex lymphoedema therapy and who are known to have suffered cellulitis in the past may benefit from antibiotic cover during treatment. Phenoxymethylpenicillin 500mg daily is recommended during the period of intensive treatment. For those allergic to penicillin, prescribe Erythromycin 250mg daily.

2. RECURRENT CELLULITIS

Antibiotic prophylaxis should be offered to lymphoedema patients who have two or more attacks of cellulitis in a 12 month period:

- Prescribe Phenoxymethylpenicillin 500mg daily or 250mg BD – or if allergic, Erythromycin 250mg daily should be the first choice. If the patient weighs over 100kg, dosage should be doubled;
- Dosage may be reduced to 250mg daily after one year of successful prophylaxis and discontinued after two years without recurrence. However, prophylaxis may need to be life-long if cellulitis recurs after two years of successful prophylaxis;
- Those patients in whom first line antibiotic prophylaxis fails may need alternative strategies including trials of Clindamycin 150mg daily.

Good skin care reduces the likelihood of cellulitis.

There is evidence that complex lymphoedema therapy reduces the frequency of cellulitis attacks. Control of swelling is important. The lymphoedema affected limb should be considered to be immuno-suppressed.

Risk factors for recurrent cellulitis include interdigital scaling, dermatitis and open wounds such as ulcers and weeping lymphangiectasis (lymph blisters). These need to be treated topically.

An increase in the dose of prophylactic antibiotic during the summer months may be considered if recurrences are noted during this time.

References:

1. British Lymphology Society. *Consensus Document on the Management of Cellulitis in Lymphoedema*. 2005. www.thebls.com
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3. Therapeutic Guidelines Limited. *Therapeutic Guidelines: Antibiotic. Version 13*. eTG complete, 2006. www.tg.com.au
4. Twycross R, Jones K, Todd J. *Lymphoedema*. Ascot Vale, Vic: Ausmed, 2003.