Episode 5.03 Show Notes
Red Legs, Swollen Legs

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Faculty: Bernard Ho

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Episode admin:

The first 3 sections are to help us organise the infographics / social media around the episode. They will not remain in the show notes which will be published on the website as well as in a pdf format.

Infographic Points

Please place here 5 points that you would like the infographic to have on it. They need to be short to fit. The aim is to give people a practical aide memoir they could put up in the office whilst making them want to listen for more!

1. Cellulitis is rarely bilateral
2. Lipodermatosclerosis can mimic cellulitis
3. Lymphoedema is a chronic condition due to damage of the lymphatic system
4. Recurrent cellulitis may respond to prophylactic antibiotics
5. Treating underlying causes proactively can prevent recurrence / complications e.g. maintaining good skin barrier with emollients

#MDTeaClub

We are running a twitter discussion alongside each episode over a week or two around it coming out. These are managed by Dan Thomas by you are more than welcome to help facilitate during this time too just let us and Dan know.

Please leave here any questions and/or links resources that may stimulate discussion in addition to those below e.g. charitable sites, guidance, papers, comment pieces.

Social Media / Website

Any resources you would specifically like us to include on the website. We will be looking to summarise the #mdteaclub discussions and add any additional resources generated to the website too.

- Lipoedema UK: http://www.lipoedema.co.uk/
- RCGP e-learning course on Lipoedema
- (https://www.dermnetnz.org/topics/rashes-affecting-the-lower-legs/)

Iain's social media:

World delirium day is on 14th March 2018 - thats next week!

<blockquote class="twitter-tweet" data-lang="en"><p lang="en" dir="ltr">Guess what happens in 2 months?

It is World Delirium Awareness Day! 14 Mar 2018

Awake, Aware, Action - Plan your events now! Please tag #WDAD2018 & @iDelirium_Aware pic.twitter.com/EoRlbbopBV</p>—

iDelirium (@iDelirium_Aware) January 14, 2018</blockquote>

<script async src="https://platform.twitter.com/widgets.js" charset="utf-8"></script>

Main Show Notes:

Learning Outcomes

Knowledge:

- To recall the common causes of red legs and how they are managed
- To recall the common causes of swollen legs
- To know the causes of lymphoedema

Skills:

- To recognise when red legs are not cellulitis
- To identify lymphoedema

Attitudes:

- To appreciate that accurate diagnosis of both red legs and swollen legs is important
- To see these presentations as opportunities to provide advice on preventative care to prevent complications of minimise recurrence.

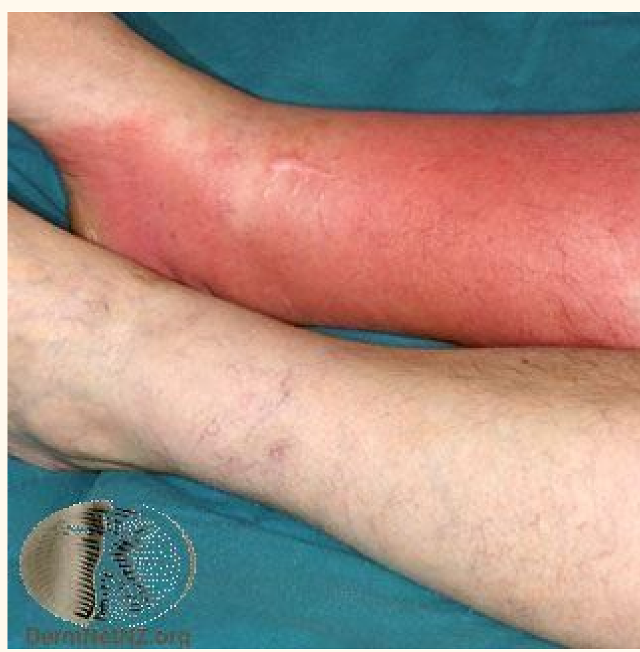
Key Points from Discussion

The MDTea Podcast provides Education on Ageing for all healthcare professionals working with older adults
Find us on Twitter: @MDTea_podcast, Facebook.com/MDTeapodcast, Stitcher and iTunes
Visit www.thehearingaidpodcasts.org.uk/mdtea for more information, to listen on the web and to sign up to our mailing list.

Red Legs

Cellulitis

Cellulitis is an infection of the skin so will be associated with features of infection such as fevers and potentially sepsis too. The onset will be rapid onset of unilateral, progressive redness.



Predisposing factors

- Presence of lymphoedema
- Previous cellulitis
- Diabetes
- Immunosuppression

Often caused by a pathogen on the skin gaining entry beneath, so look for and ask about skin breaks including insect bites and fungal infections and check between the toes. Ensure good foot care and maintaining good skin care including adequate moisture barrier maintained to prevent further infections.

Image courtesy of dermnetnz.org

Treatment is with antibiotics. If more than two episodes in a year then can consider prophylaxis.

Antibiotic prophylaxis for preventing recurrent cellulitis: a systematic review and meta-analysis. Oh et. al, Journal of Infection 2014

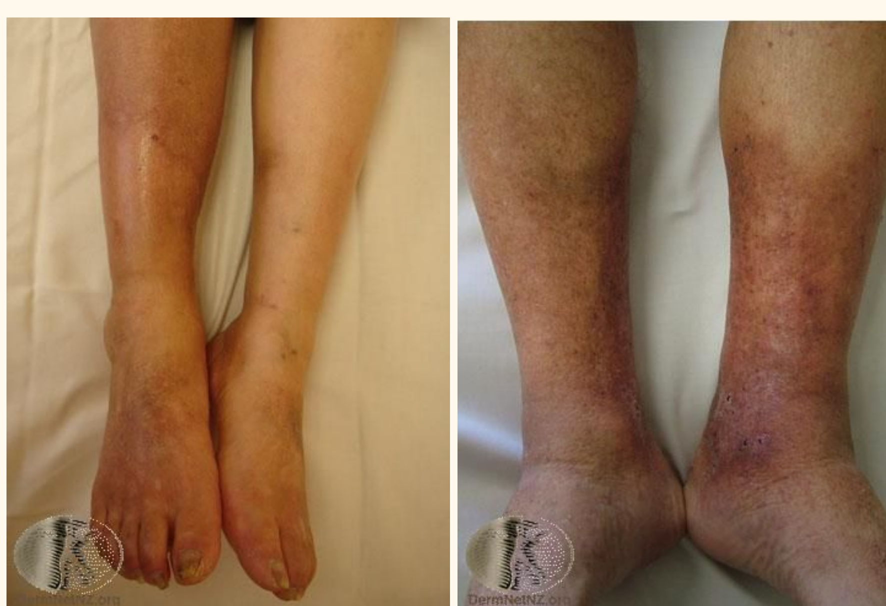
Interview with a dermatologist / microbiologist on evidence for antibiotic prophylaxis and comment on use of prolonged course of antibiotics for difficult to treat cellulitis / in certain conditions - ESH?

Lipodermatosclerosis

An inflammatory condition of the lower legs usually due to venous insufficiency. It is usually a deep red colour, compared to the bright pink of a cellulitis. Acute flares can happen and can be red, painful and scaly. Will not be associated with raised inflammatory markers and does not have an acute progression. It is usually bilateral, which cellulitis rarely is.

Chronic lipodermatosclerosis is associated with increased swelling in the leg, moderate redness, increased pigmentation and atrophe blanche (small white areas).

Below are pictures of acute (left) and chronic (right) lipodermatosclerosis, courtesy of dertnetnz.org



Panniculitis

An inflammation of the subcutaenous fat, so a much deeper inflammatory process. They are painful, and often ill defined.

Often a presenting feature a systemic problem, rather than one locally in the leg. Can be seen in many conditions including Inflammatory Bowel Disease, sarcoidosis and some drugs can induce it, such as NSAIDS and the oral contraceptive pill.

Image courtesy of dermnetnz.org

Swollen Legs

Fluid Overload

This is commonly seen as a consequence of heart failure. If this happens quite quickly it can often appear red and may blister. Usually though it will just be a swelling of the skin with subcutaenous fluid. It will be bilateral and pitting. The history will usually help to differentiate this. Treatment of the underlying cause, so in this case, through diuresis to remove the excess fluid as well as good wound care of any breaks to prevent deterioration.

Dependent Oedema

It can be difficult to determine the difference between fluid overload and dependent oedema. In dependent oedema, the fluid tends to predominantly follow gravity, so if the legs are flat on the bed, the undersides will be swollen and pitting, and this will change to be feet and ankles on sitting in a chair. It tends not to rise up the legs so far as fluid overload can. Investigations for heart failure including blood tests such as BNP and an echocardiogram can help to rule out heart failure which requires diuretic therapy.

The mainstay of advice is usually to elevate the legs closer to the level of the heart to help the fluid to be cleared from the legs. There is some debate about this as a treatment….

Interview on the debate - dermatologist at ESH?

Low Protein States: Malnutrition, Critical Illness and Nephrotic Syndrome.

Low protein can be seen in severe malnutrition and when a person has been critically unwell, usually with a severe illness or prolonged physiological stressor. Examples of when this is commonly seen include after an ITU stay or emergency surgery with long recoveries. Dietician involvement is important to aid recovery.

Low protein states cause oedema in all extremities, including the upper limbs but will also, within this, be worse in dependent areas. Other causes are not usually seen in the upper limbs.

Nephrotic syndrome is a particular condition in which the kidneys release excess protein leading to a whole body depletion of stores. This can be picked up on a urine dipstick for protein which will be highly positive. In nephrotic syndrome, the pattern of oedema will often include the arms and sometimes the face.

Drugs

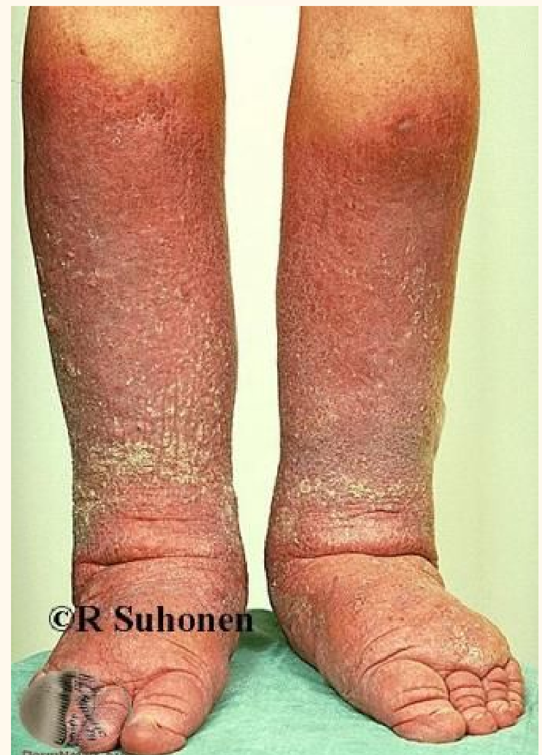
Drugs which cause fluid retention, for example blood pressure medications such as amlodipine (a calcium channel blocker), can result in swollen legs.

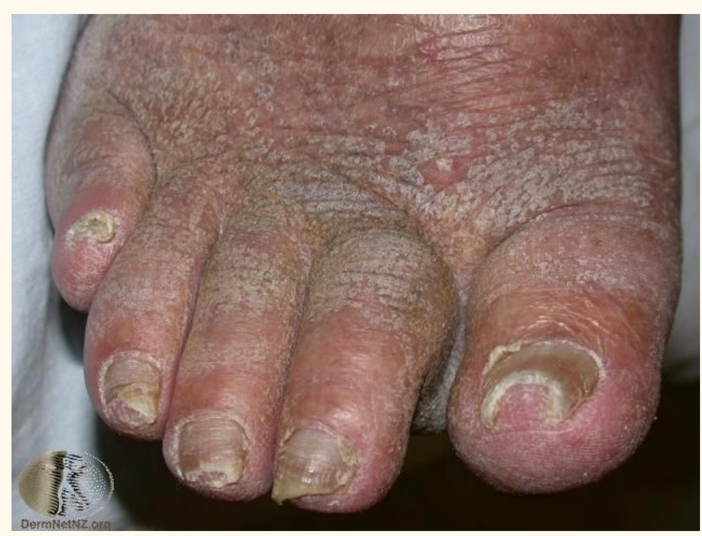
Lymphoedema

Lymphoedema is a condition affecting the lymphatic system of the body, a network of channels and glands which help fight infection and remove excess fluid. It can be primary (due to a problem in the development of the lymphatic system (presents in early adulthood at latest) or secondary. Secondary causes are due to damage to the lymphatic system.

- Following lymph node surgery or radiotherapy treatment of cancers
- Severe cellulitis can cause scarring of the lymphatic system
- Inflammatory conditions such as RA or eczema for same reason
- Venous disease (including DVT and varicose veins) - abnormal or damaged veins causes overflow of fluid from veins into tissue spaces which overwhelms and eventually exhausts the lymphatic system involved.

In its early stages, lymphoedema can be pitting and resemble fluid overload. In the latter stages skin becomes hardened and tight resulting in deep, chronic lines. In particular 'squaring of the toes' can be an early sign of this.



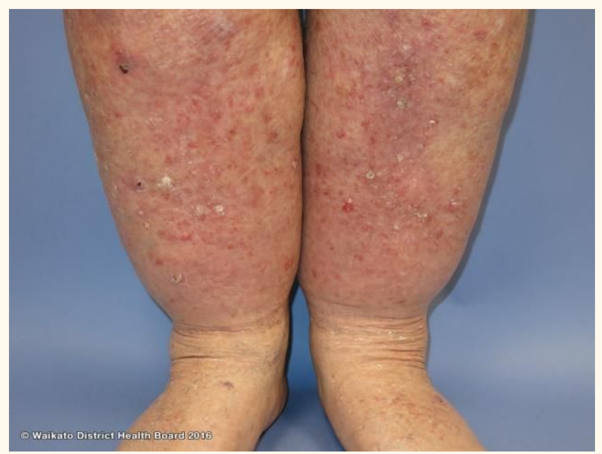


Images courtesy of dermnetnz.org

Interview with dermatology (lymphoedema at SGH) on investigations, why / when to refer. Benefits of bandaging. Cellulitis in lymphoedema.

Mainstay of treatment is compression bandaging. This requires the exclusion of significant arterial insufficiency before applying, through either a doppler or an ABPI, depending on which is available.

Lipoedema



This is an abnormal accumulation of adipose tissue (fat) predominantly in the lower limbs which is gaining recognition. It fails to respond to compression and may initially be mistaken for lymphoedema.

Image courtesy of dermnetnz.org

Lipoedema UK: http://www.lipoedema.co.uk/
RCGP e-learning course on Lipoedema

Curriculum Mapping:

This episode covers the following areas (n.b not all areas are covered in detail in this single episode):

<table>
<tr><th>Curriculum</th><th colspan="2">Area</th></tr>
<tr><td>NHS Knowledge Skills Framework</td><td colspan="2">Suitable to support staff at the following levels:
• Personal and People Development: Levels 1-3
• Service Improvement: Level 1 - 2</td></tr>
<tr><td>Foundation curriculum</td><td>Section
2.1
2.2
3.10

3.16</td><td>Title
Patient as centre of care
Communication with patients
Recognises, assesses and manages patients with long term conditions
Demonstrate understanding of health promotion and illness prevention</td></tr>
<tr><td>Core Medical Training</td><td colspan="2">Dermatology
Limb Pain & Swelling</td></tr>
</table>

	Managing long term conditions
GPVTS program	Section 2.03 The GP in the Wider Professional Environment • Core Competence: Managing medical complexity Section 3.05 - Managing older adults • Core Competence: Managing medical complexity • Core Competence: Working with colleagues and in teams • Core Competence: Practising holistically and promoting health
ANP (Draws from KSF)	Section 7.31 - Problems with skin
Geriatric Medicine Training Curriculum	29. Diagnosis and Management of Chronic Disease and Disability 38. Tissue Viability

Feedback

We will add feedback to this as we receive it! The website will have the most up to date version always available: www.thehearingaidpodcasts.org.uk/mdtea

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Check out our cool infographic *A sip of…* on the website page for this episode, summarising 5 key points on this topic. It's made for sharing!