Obesity and Lymphoedema : a clinical dilemma

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Outline of session

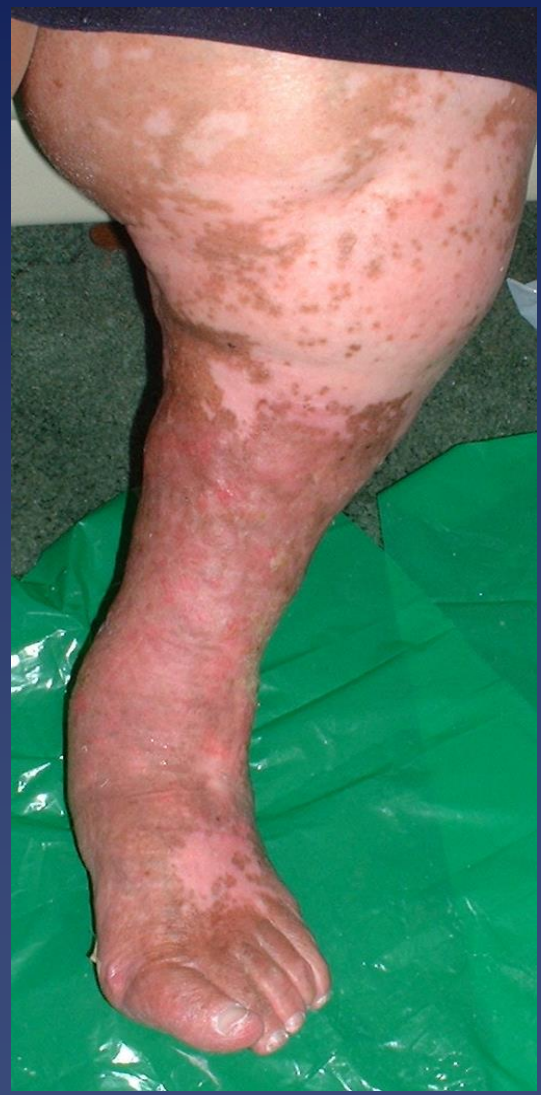
- The growing epidemic of obesity
- The link of obesity to lymphoedema
- Professional attitudes and challenges to care delivery
- Diagnostic imperatives and assessment challenges
- Psychosocial issues
- Towards effective care

The growing epidemic of obesity

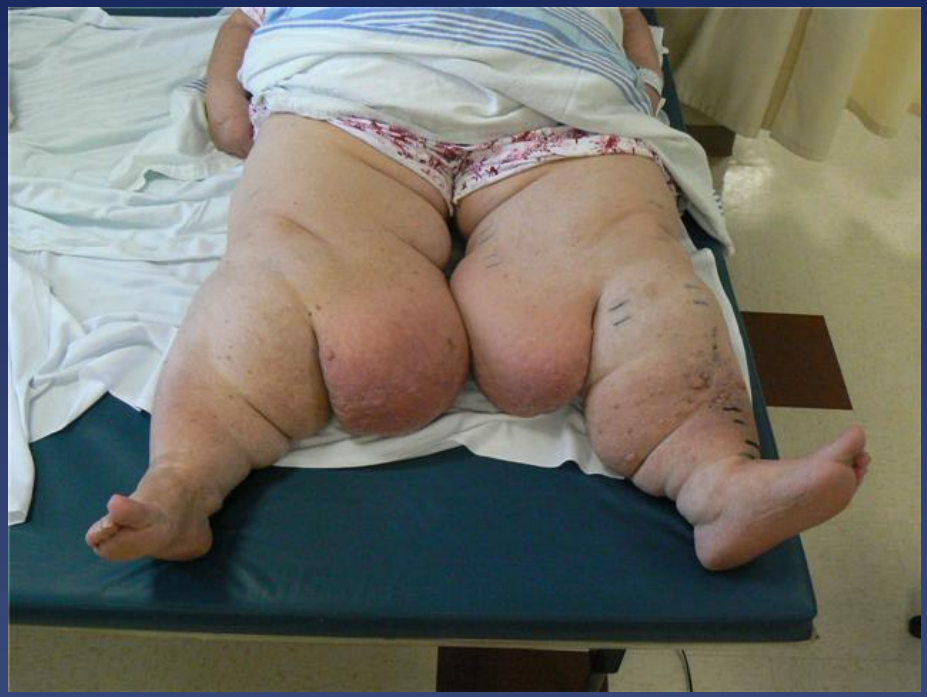
The epidemic of obesity

Health and Social Care Information Centre (2016)

- Increase in obesity from 15% in 1993 to 26% in 2014
- Common co-morbidities
  - Cardiovascular disease
  - Hypertension
  - Type 2 diabetes
  - Sleep apnoea
  - Depression
  - Reduced mobility



The relationship of Lymphoedema and obesity



Lymphoedema threshold with BMI

Strong association with all forms of lymphoedema and obesity

BMI 50/60kg/m^2 - lymphoedema

Irreversible damage to lymphatics

(Greene et al 2015)

Lymphoedema Impact and Prevalence — International Lymphoedema Framework

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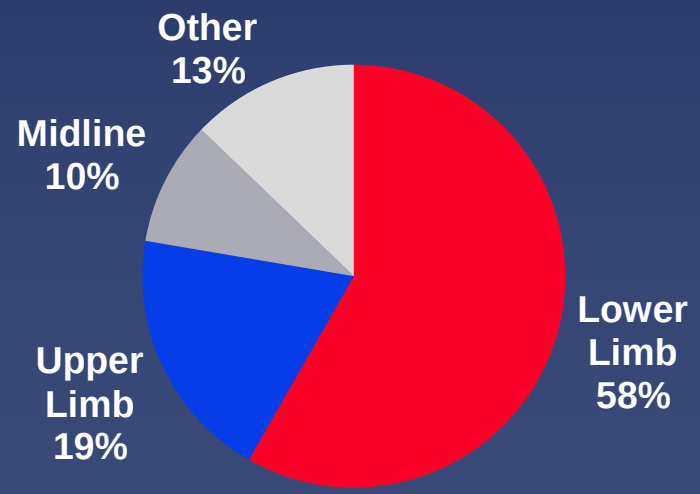
Patients with Chronic Oedema (n=9,391)

	N	%
Primary lymphoedema	**1413**	**15%**
Secondary lymphoedema	**7904**	**84%**
Undefined	74	1%
Lymphoedema only	7842	84%
Lymphoedema & Wound	**1475**	**16%**
Morbidly obese	**1609**	**18%**
Obese	3124	34%
Normal weight	4166	46%
Under weight	189	2%
Cellulitis	**3219**	**34%**
Infection	1330	14%



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Determinants of HRQoL (EQ5D)

	n	Mean	SD	p
Female	761	63,6	20,0	0.001
Male	133	56,5	22,1	
Lymphoedema only	818	63,3	20,1	<.001
Lymphoedema & wound	76	53,9	23,0	
Morbidly obese	60	52,7	20,2	
Obese	280	61,2	20,1	<.001
Normal weight	528	64,6	20,2	
Under weight	25	56,3	22,1	
No cellulitis	672	63,9	20,3	<.001
Cellulitis	222	58,2	20,4	

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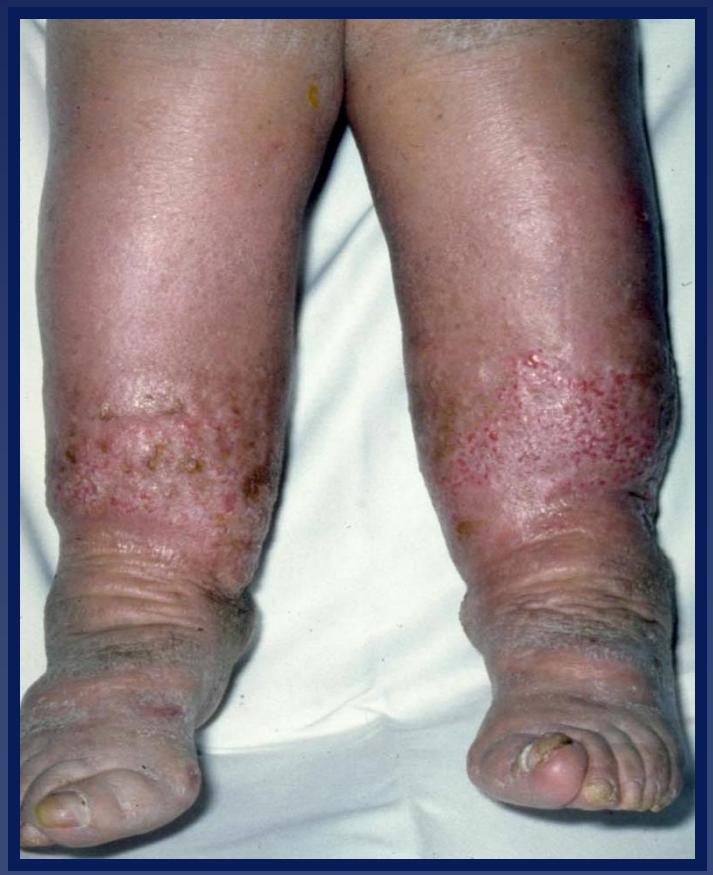
Community Nursing Prevalence and Risk Factors

	N	%
Nott City	548	**51.6 %**
Nott West	124	**68.5 %**
Leicester City	768	**59.2 %**

- **Clinical service *(p=0.024)***
- **Age *(p=<0.001)***
- **Ethnicity *(p=<0.001)***
- **Obesity *(p=<0.001)***
- **Heart failure/ CHD *(p=<0.001)***
- **Wound (*p=<0.001)***

70% have a concurrent wound

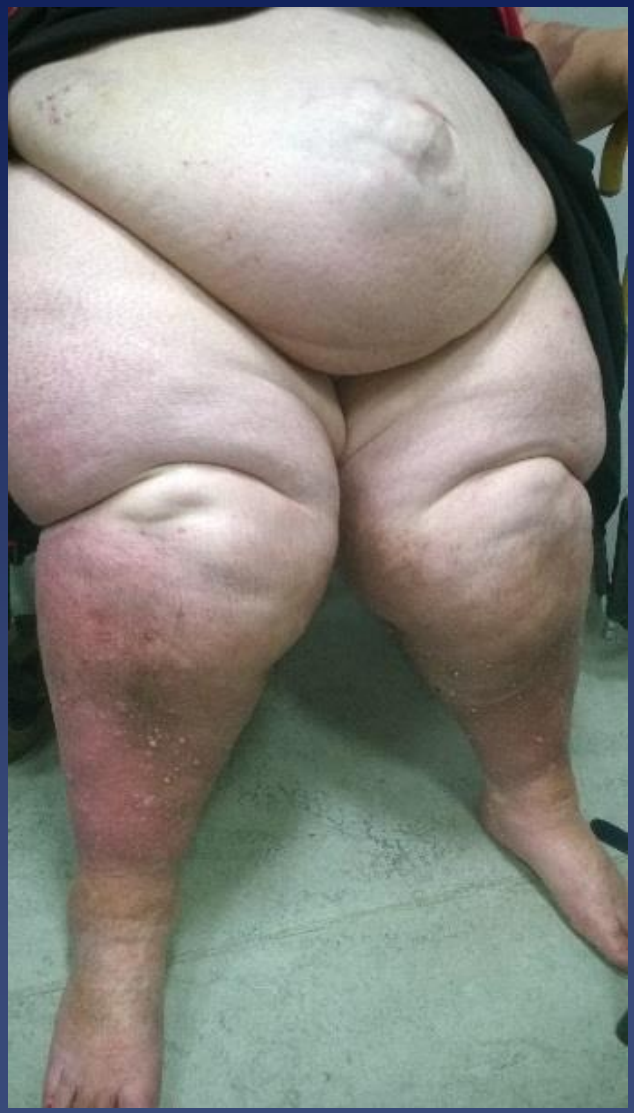
The impact of chronic oedema on community nursing



- 3.99 per 1000 population
- 30/1000 in those aged over 85 years
- Strong association with
  - Age
  - Reduced mobility
  - Obesity
  - Long term disability
  - Leg ulceration

The link of obesity to lymphoedema

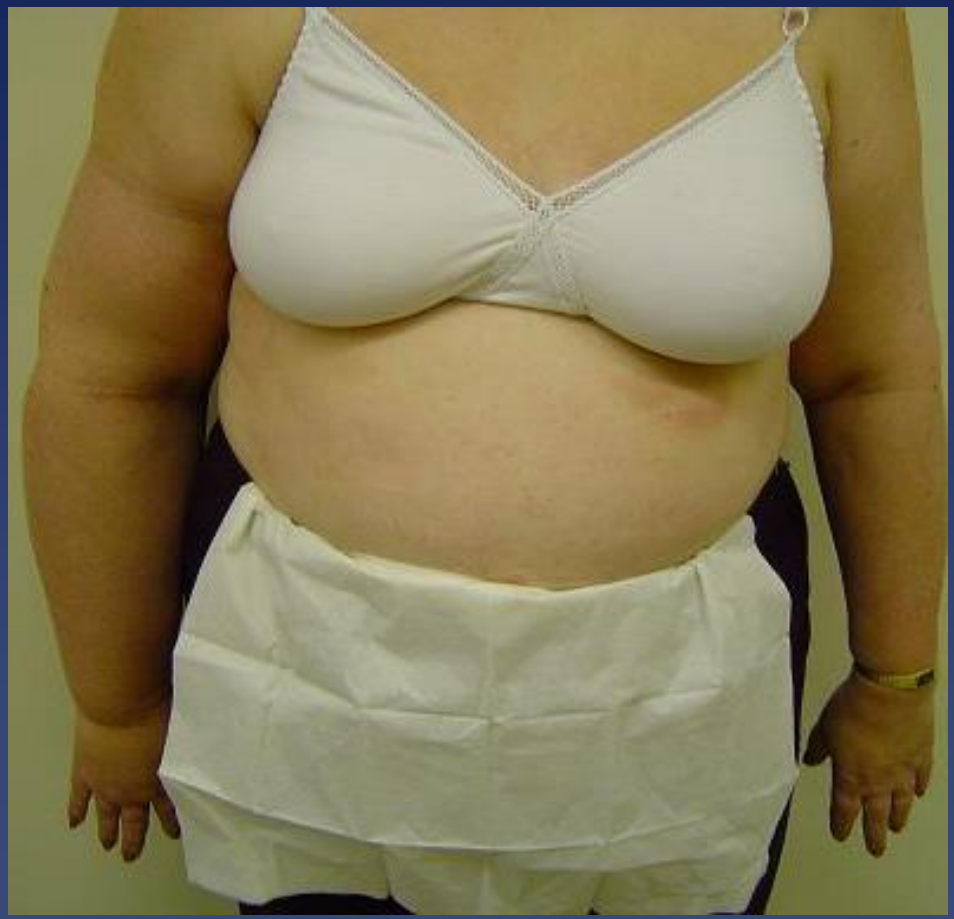
Why does obesity lead to Lymphoedema



- Mechanisms are not clear
- Adipose tissue and lymphatic failure
- Reduced lymphatic transport
  - Obstruction to flow
- Inflammation and cellulitis are highest in morbid obesity
  - Further destruction of lymphatics
- Reduced function
- Gravitational effects of sitting on capillary filtration
- Inability to lose weight

Professional attitudes and challenges to care delivery

Professional attitudes to obesity



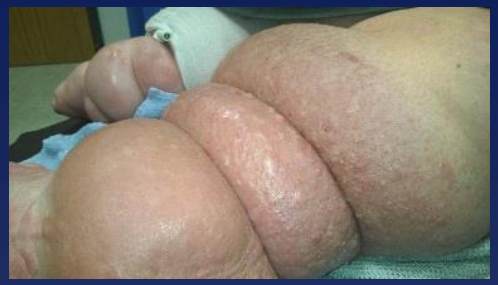
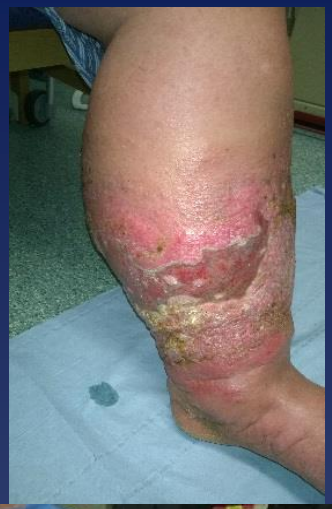
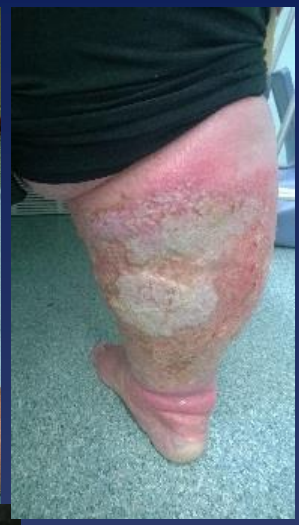
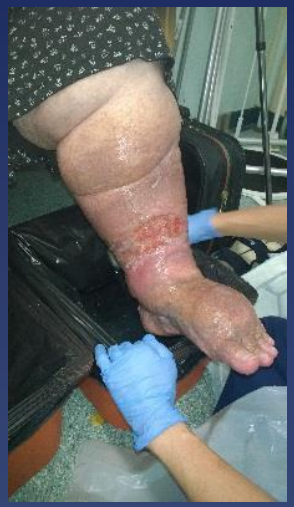
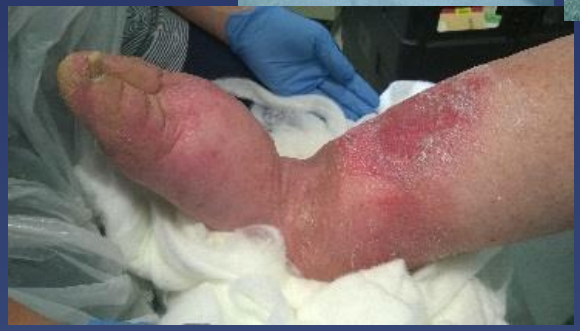
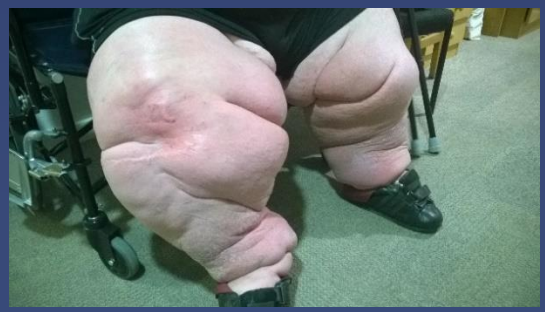
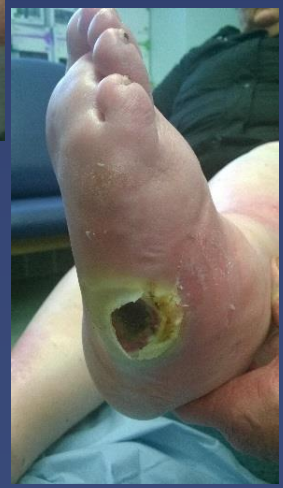
- Professional beliefs that obesity is due to laziness or lack of willpower
- Patients are time consuming physically and emotionally for professionals
- Considered “difficult “ changes professional behaviour
- Danger of blaming treatment failure on the patient
- Coping with patients emotional distress
- Evidence that CDT is more complex and results are not sustained
- Lack of guidance on how to manage

Challenges to care delivery

- Treatment often takes two therapists
- Concerns over safety in metabolically unstable patients
- Traditional approaches to CDT fail
- Issues of manual lymphatic drainage
- Inability to find appropriate compression
- Inability to discharge patients to the community
- Some services refuse to treat bariatric patients
- Requirement for multi-professional teams
- Link to bariatric services

Diagnostic imperatives and assessment challenges

Diagnostic challenges (medical issues)

Cardiac status

- **Check for concurrent heart function**
- **BNP blood test**
- **If abnormal echocardiogram**

Renal function
Liver Function

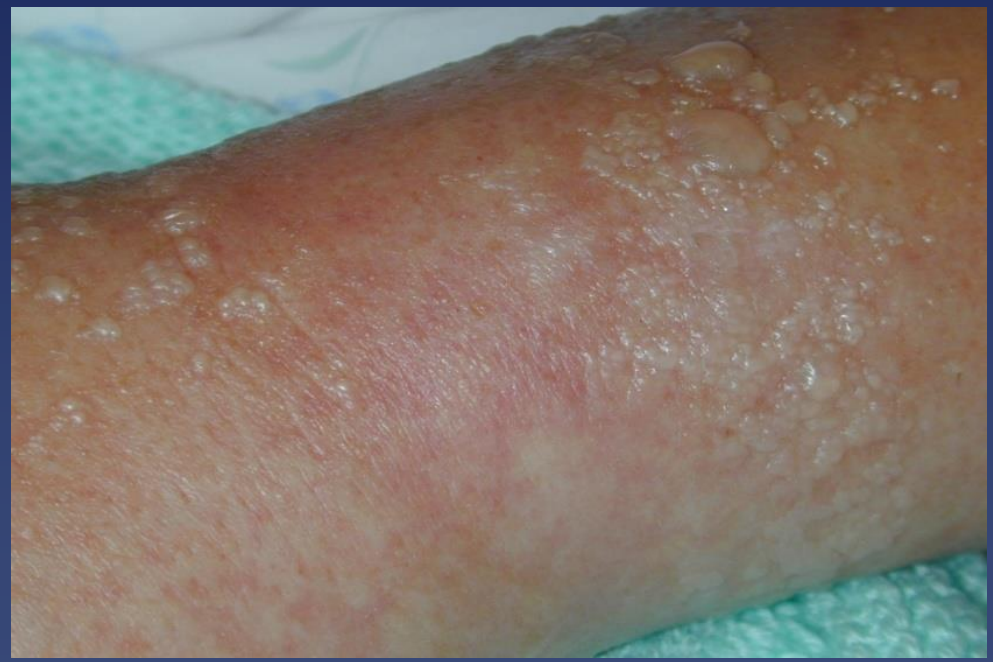
Functional status and ability to manage treatment

Concurrent diabetes

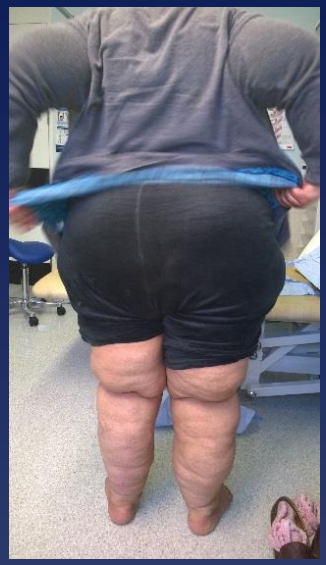
Cellulitis / chronic wounds

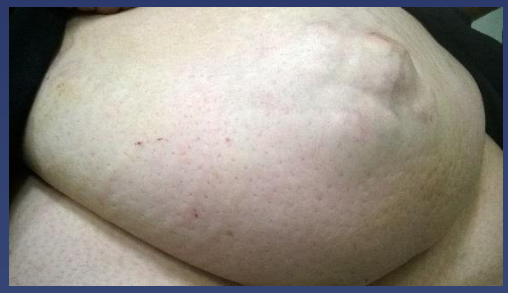
Aspects of medical assessment

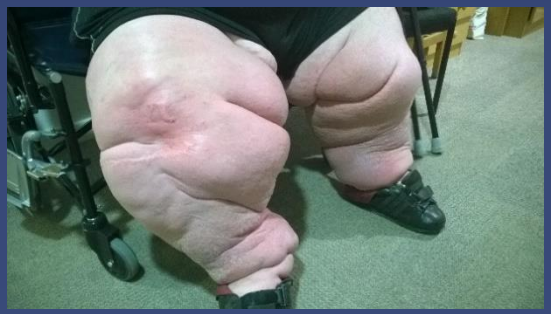
- ***Identify the underlying cause of oedema***
  - **Optimise medication**
  - **Correct use of diuretics**
  - **Drugs associated with oedema**
  - **Recurrent cellulitis**
  - **Heart failure**
  - **Active and recurrent cancer**



Assessment challenges



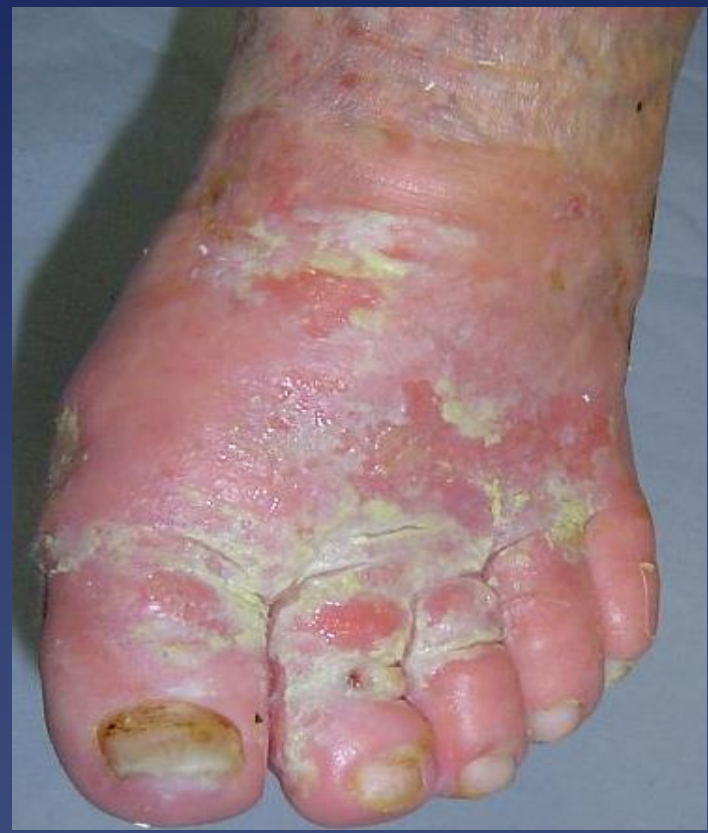




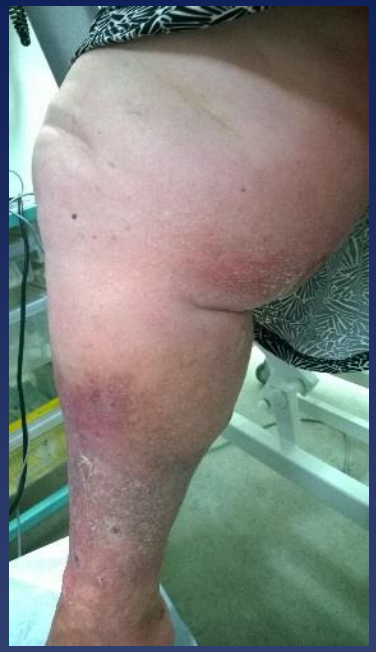
- Understanding patients beliefs about the link to obesity and lymphoedema
- Psychological status
- Life style issues
- Patient support systems
- History of obesity and lymphoedema
- Experiences of CDT treatment
- Identifying patient goals for outcome
- Exploring attitudes to bariatric surgery

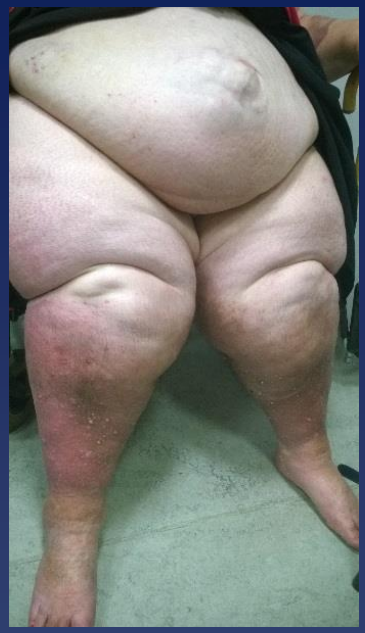
Therapy assessment

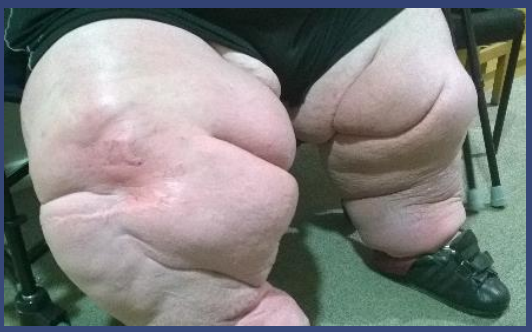
- Assessment of swelling
- Pitting oedema
- Tissue changes
- Circumference measures
- Lymphorrhoea
- Signs of cellulitis/use of antibiotics
- Wounds
- Distribution of swelling
- Limb shape distortion
- Neuropathy

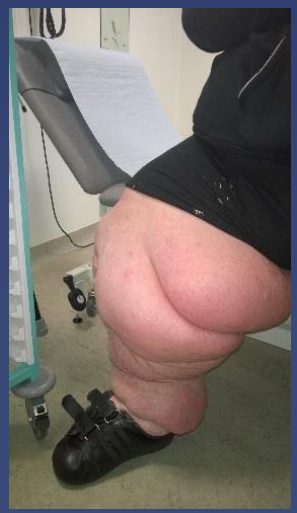


Psychosocial issues





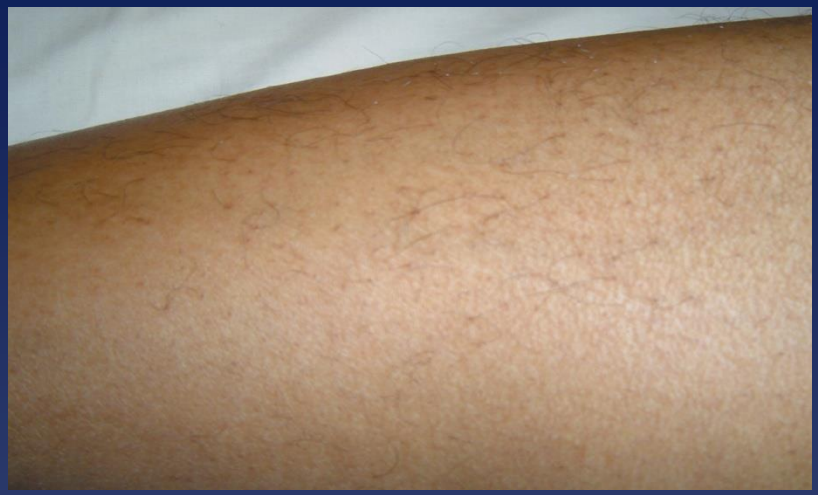


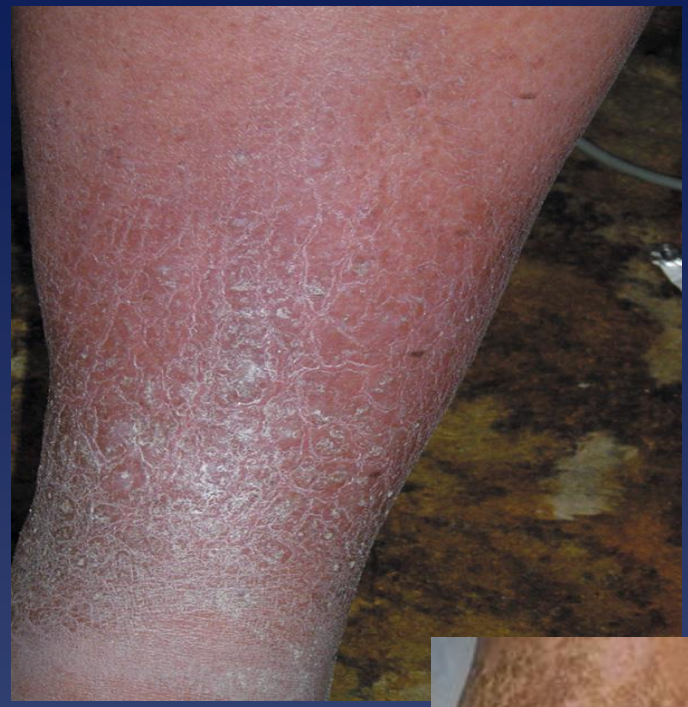


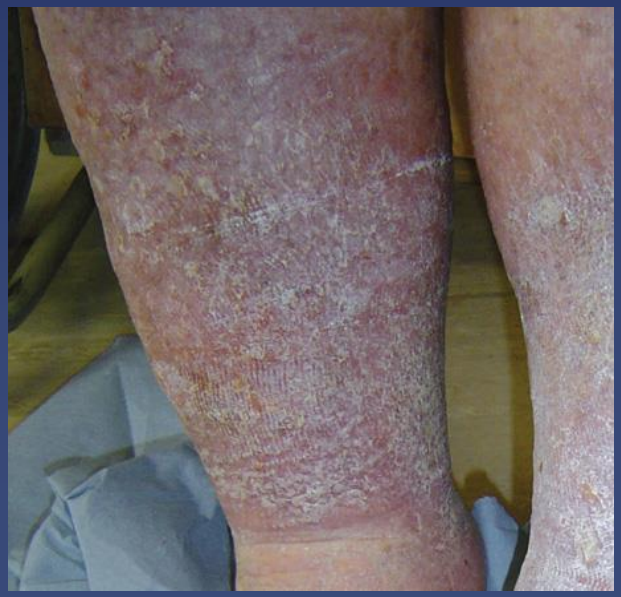
- Depression assessment
- Pain assessment
- Coping mechanisms
- Social support and link to treatment
- Unhealthy family/partner relationships
- Adherence / concordance to treatment
- History of relationships with professionals

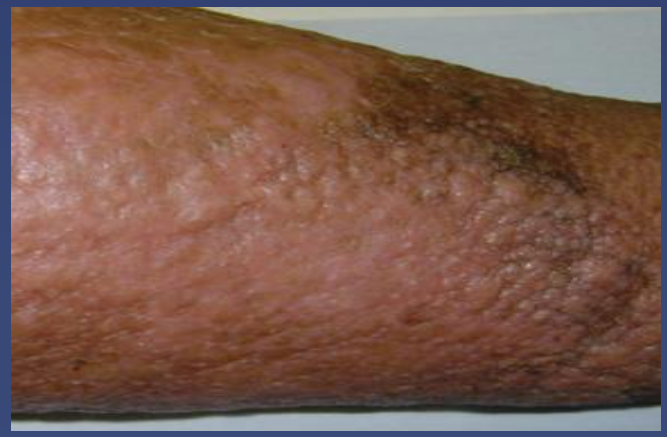
Towards effective care

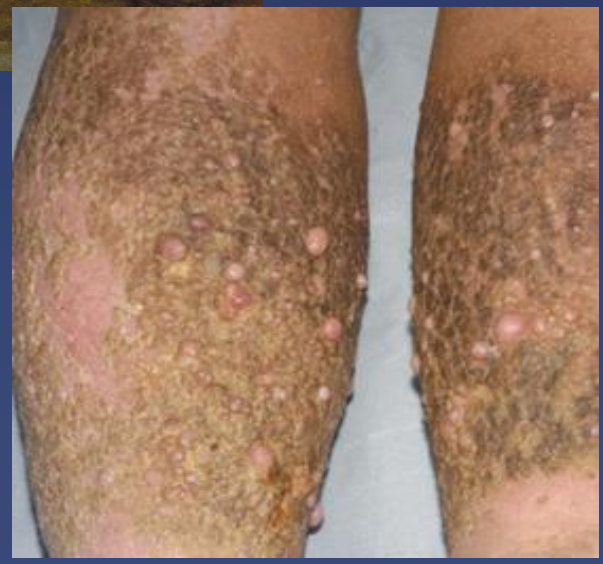
Managing the skin (1)



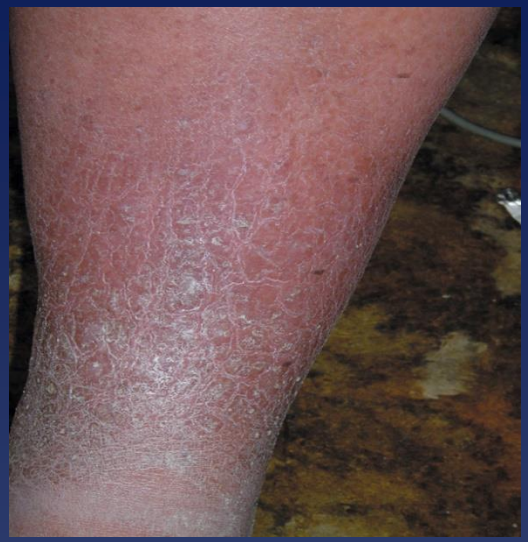


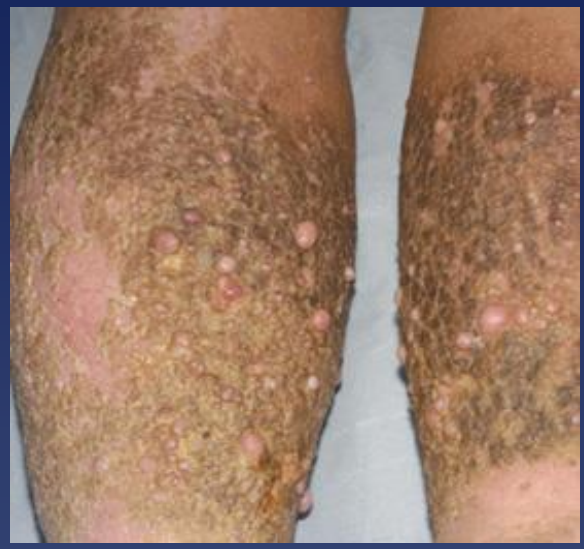


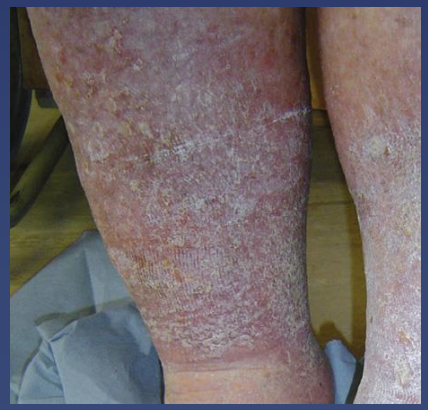


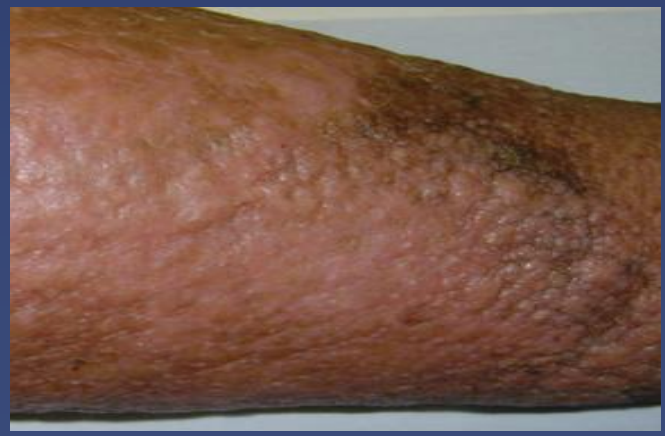


Managing the skin (2)



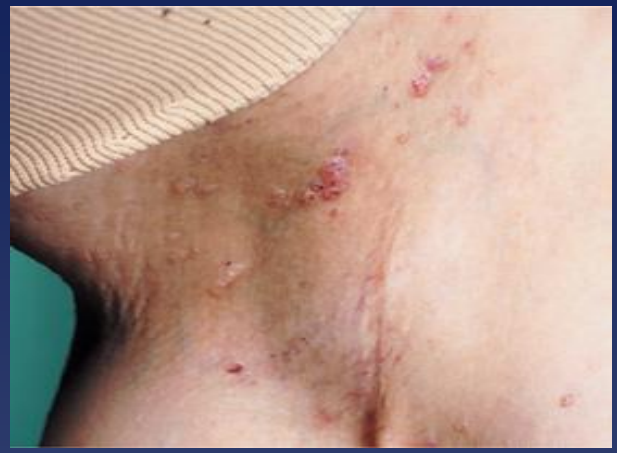


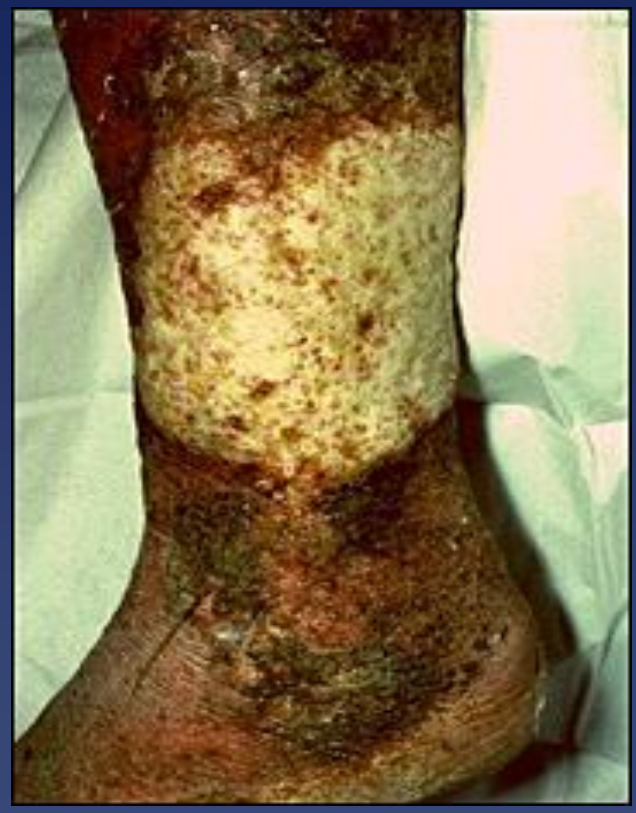


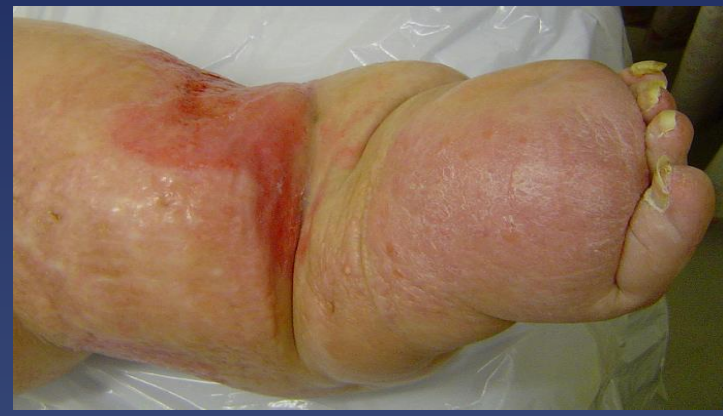


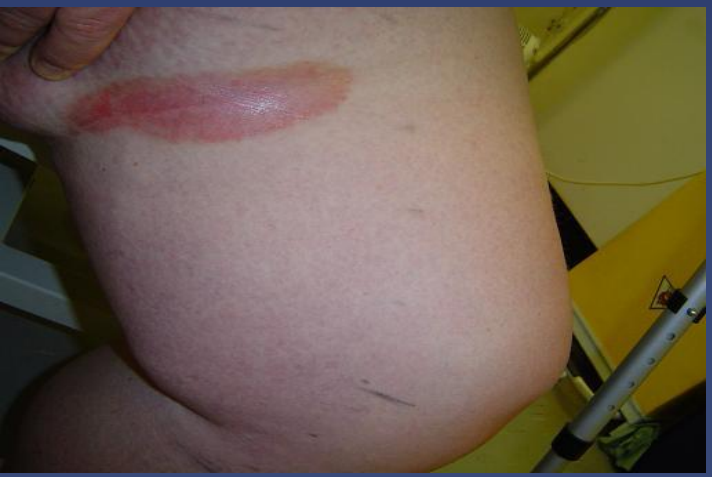
- Skin hygiene
- Control of mycosis
- Control of bioburden
- Use of emollients
- Control of hyperkeratosis
- Treatment of eczemas
- Control of Lymphorrhea
- Avoidance of maceration
- Correct choice of wound dressings

Managing the skin (3)



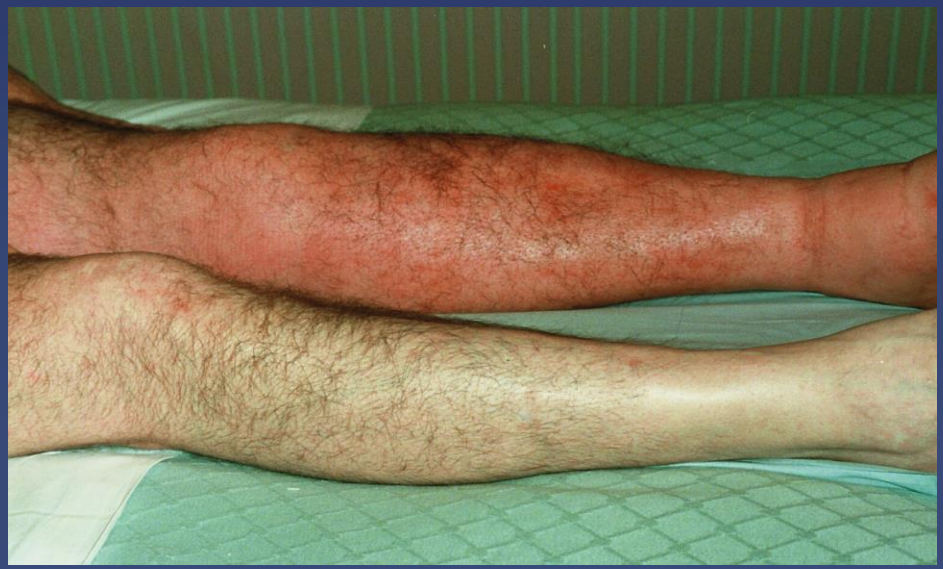


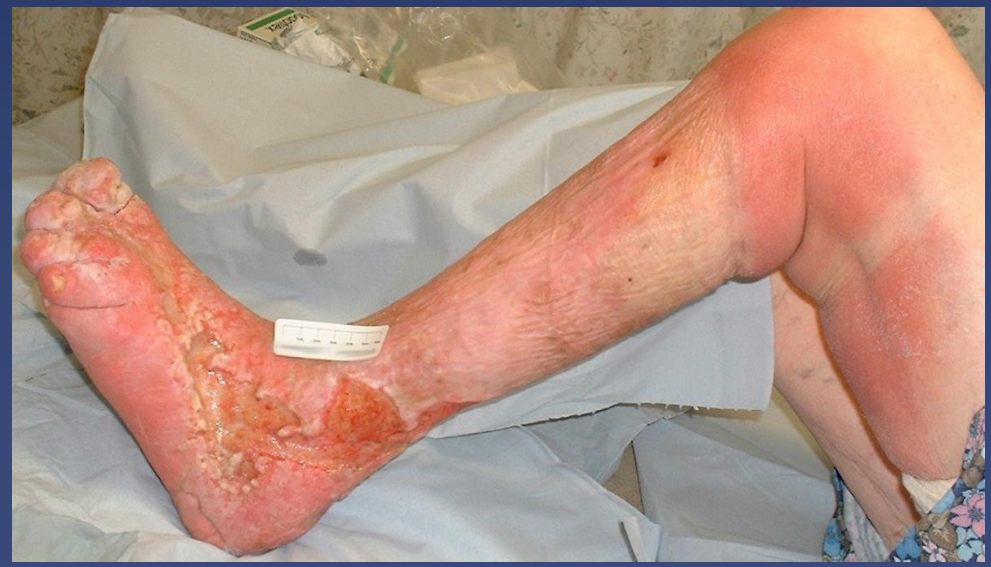




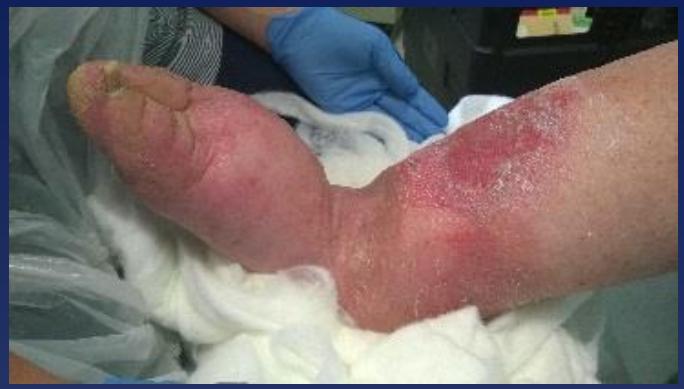
Assessment and management of cellulitis

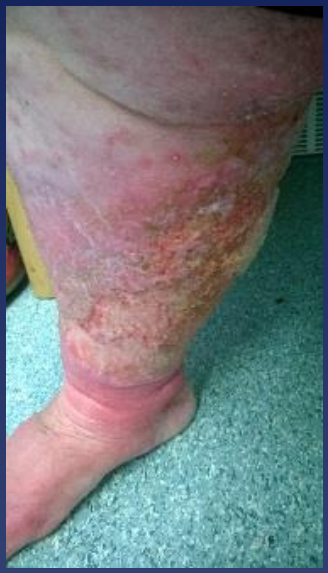
- Chronic oedema associated with cellulitis
- 50% of patients have recurrent cellulitis
- Systemic symptoms often require IV antibiotics
- Often associated with mycosis and poor skin hygiene
- Antibiotics required for several weeks/prophylaxis

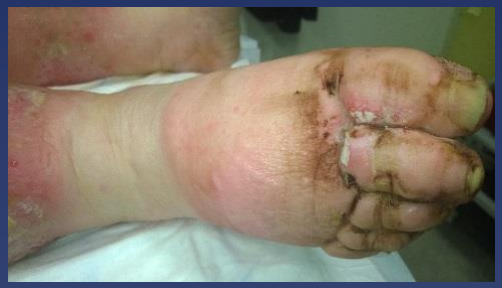


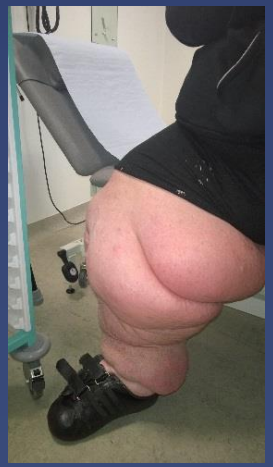


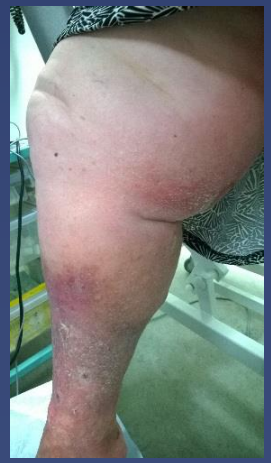
Planning CDT

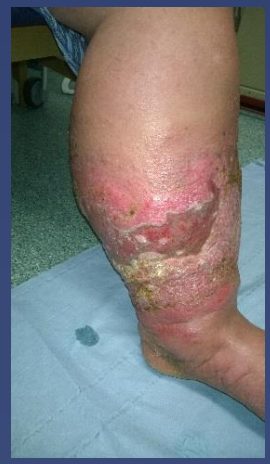






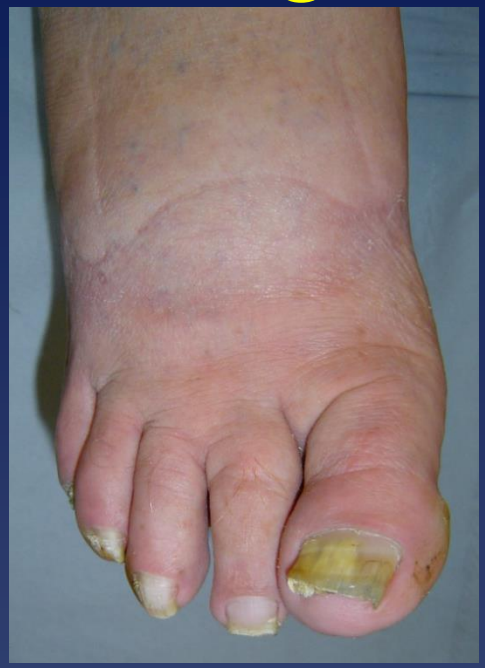


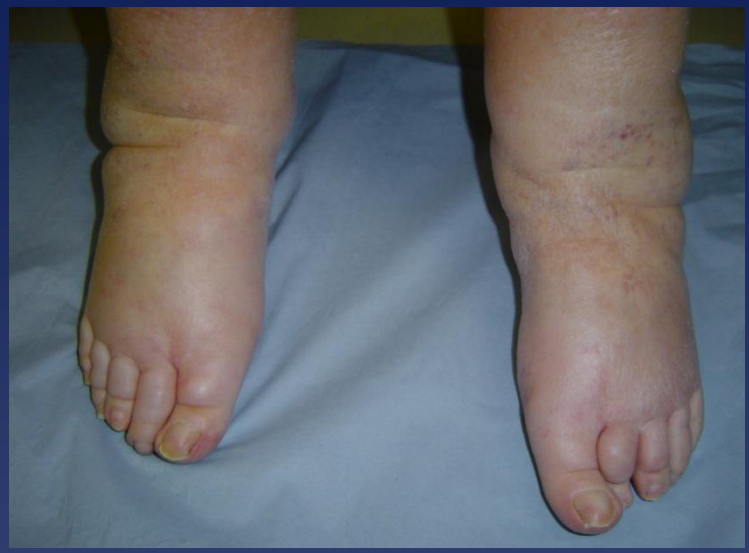


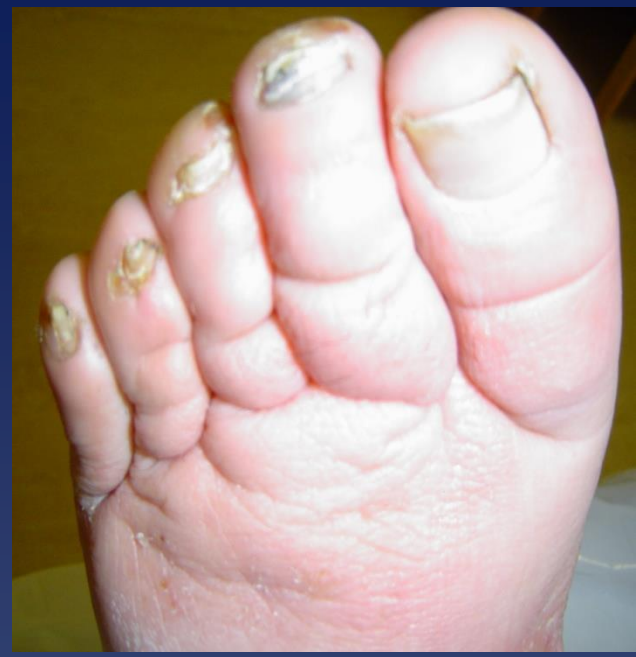


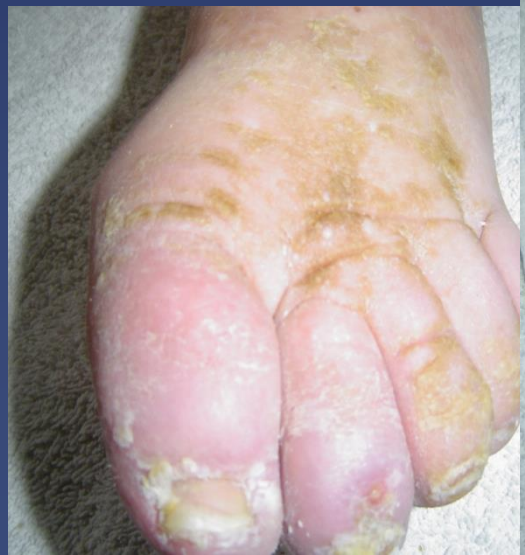
- What is the goal of treatment?
- How realistic is full CDT for the patient?
- What service constraints influence treatment?
- How will the patient cope with compression?
- How much fluid will be moved during CDT?
- How will the patient cope at home?
- How will the outcomes be maintained?
- How will intensive treatment be followed by maintenance treatment?
- Can the patient reduce weight?

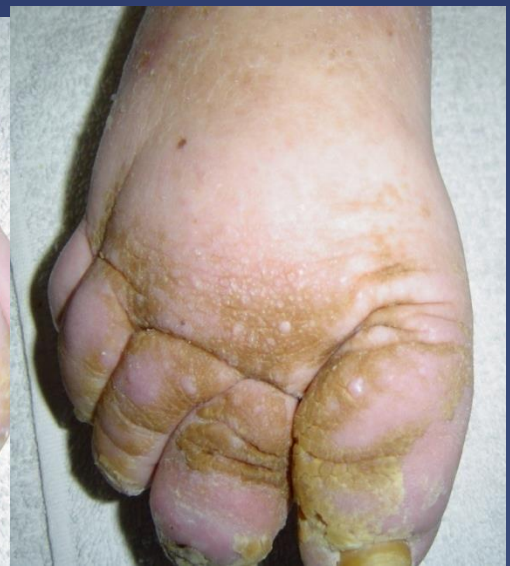
Progressive chronic oedema of the foot

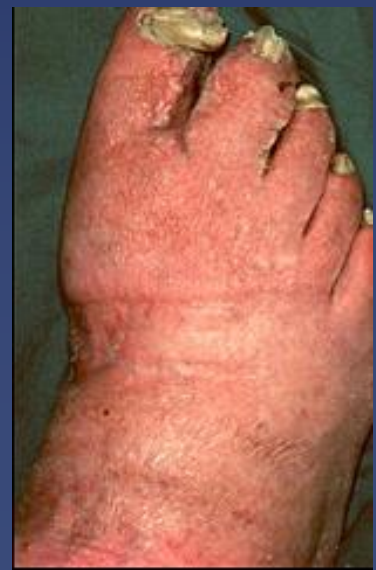


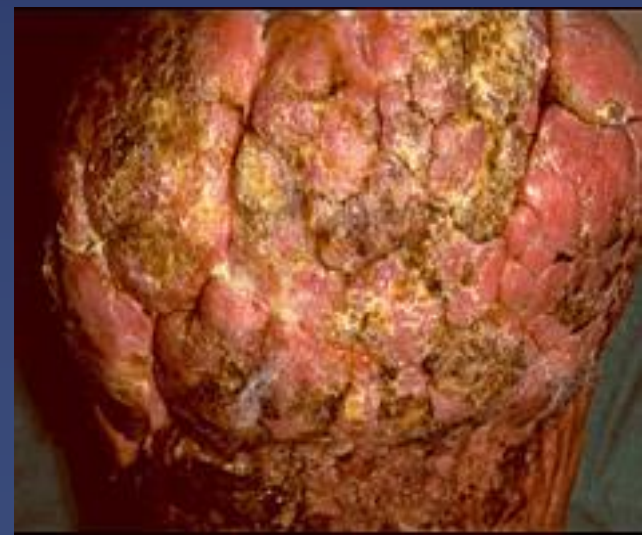




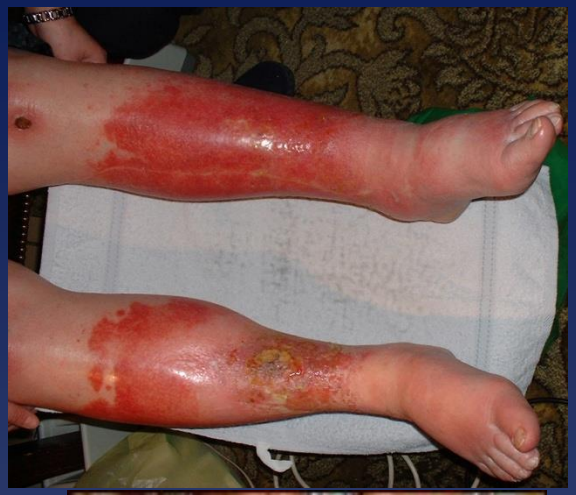


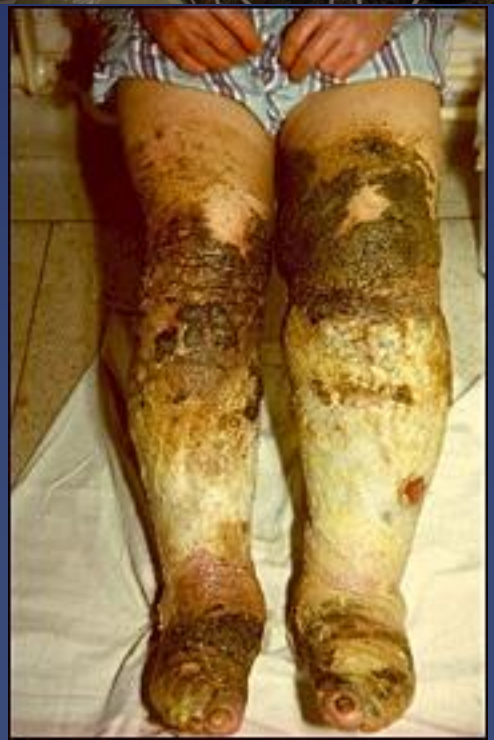


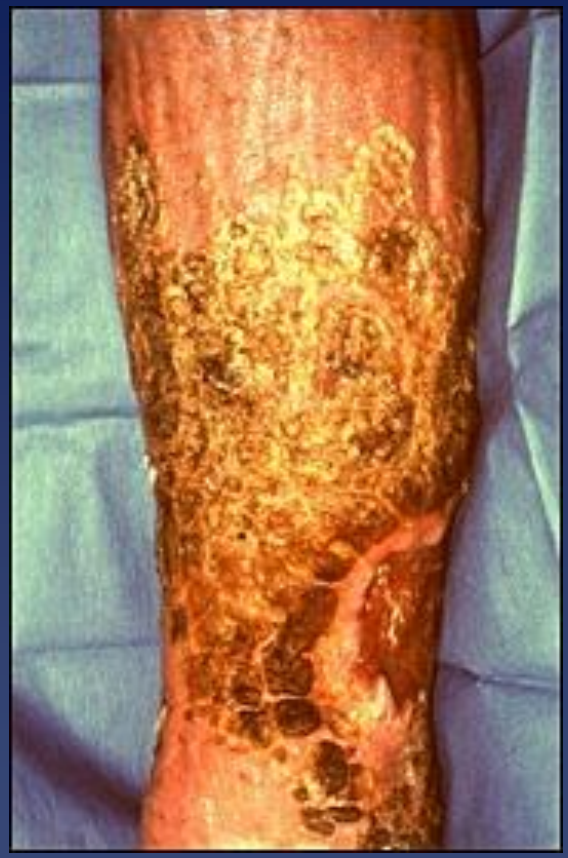


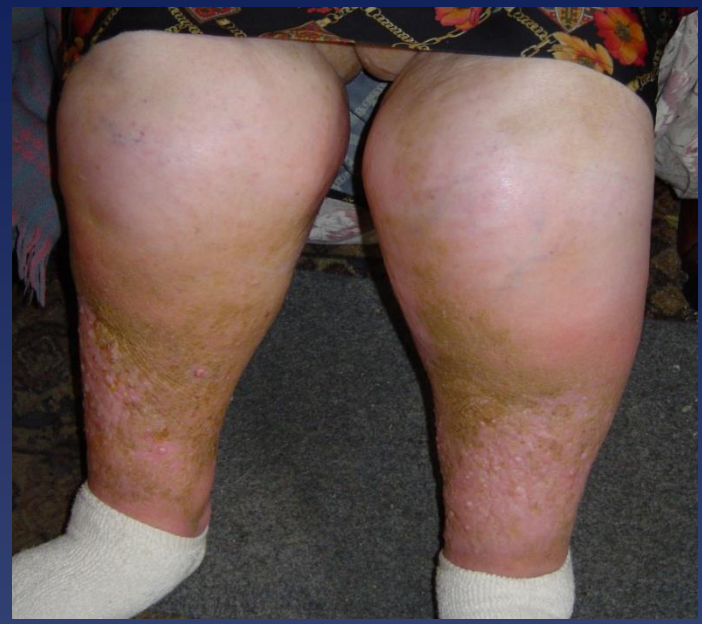


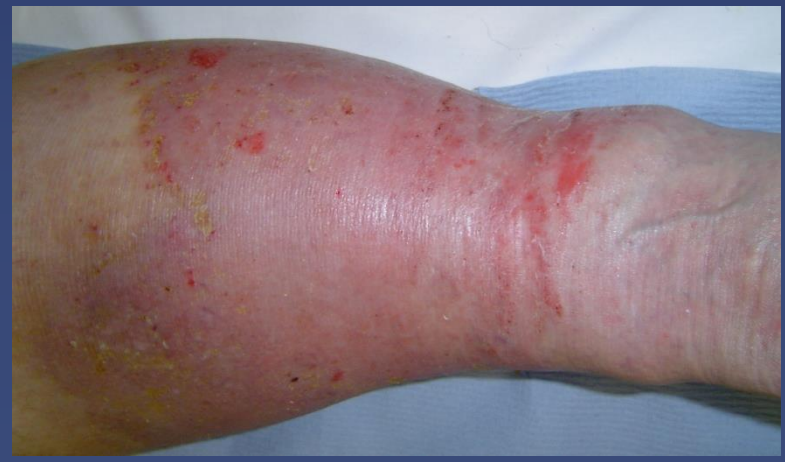
Chronic oedema in the community



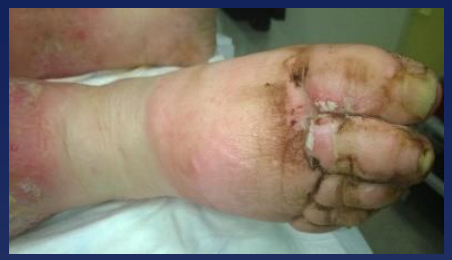


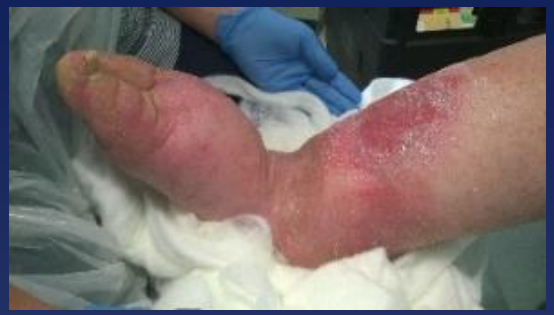


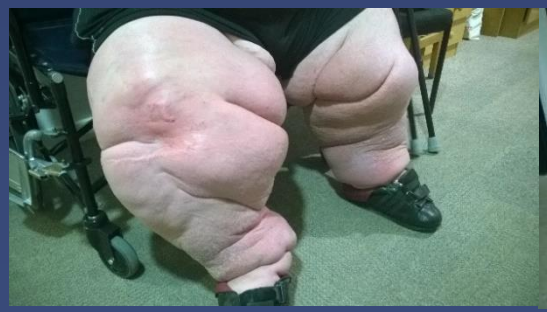




The challenges of adapting compression

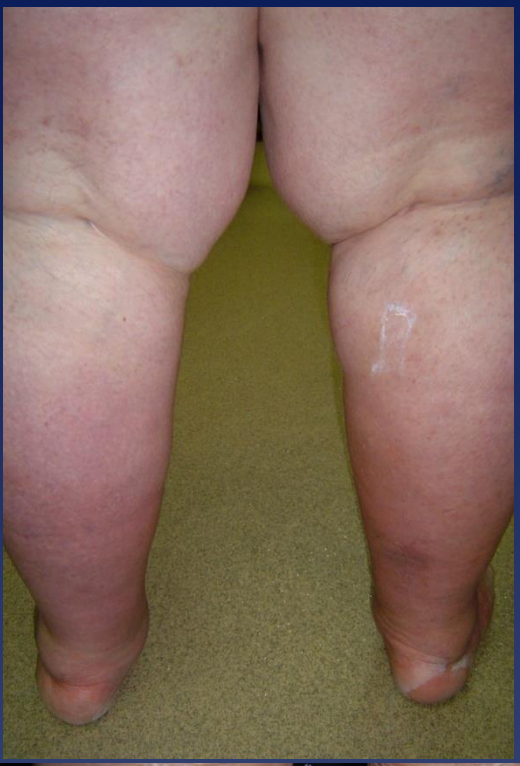


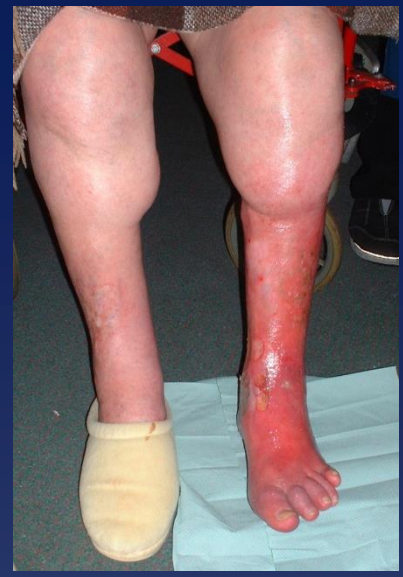


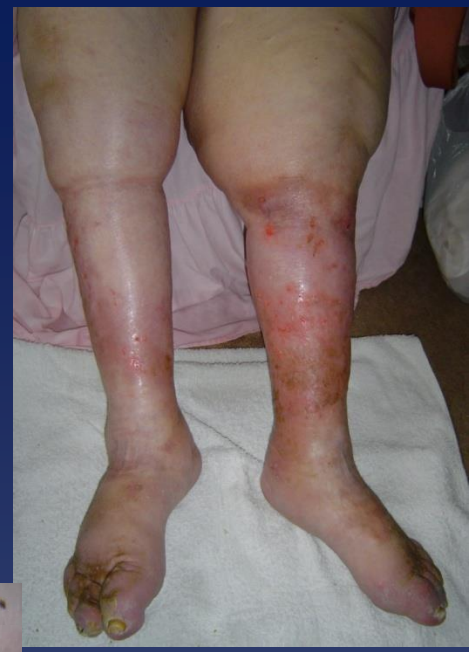


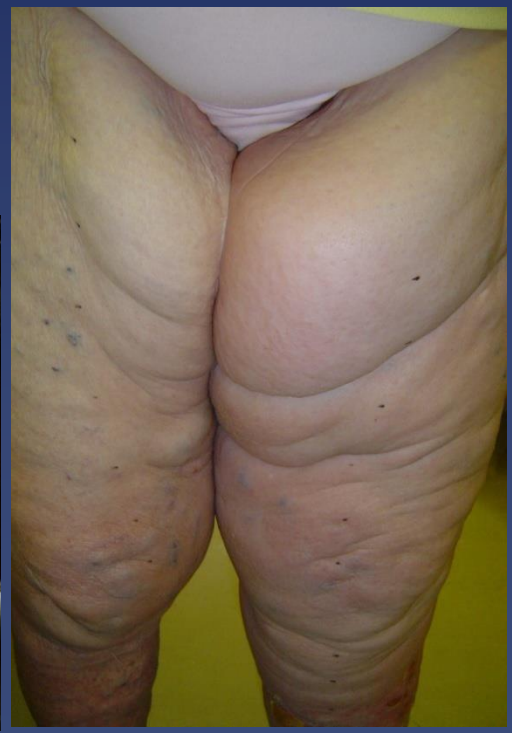
- Inadequate pressure due to size of limb
- Compression adaption in extreme shape distortion
- Managing foot and toe swelling
- The dilemma of below vv full compression
- Difficulties in donning and doffing compression garments
- Using compression wraps
- Prevention of rebound oedema
- Patient factors that influence success

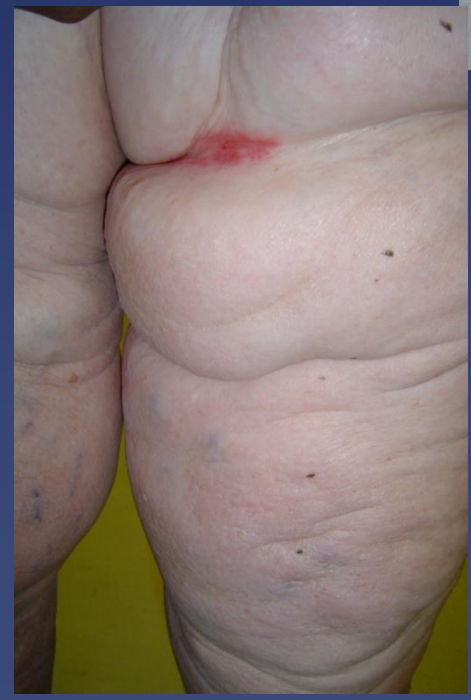
Full leg compression

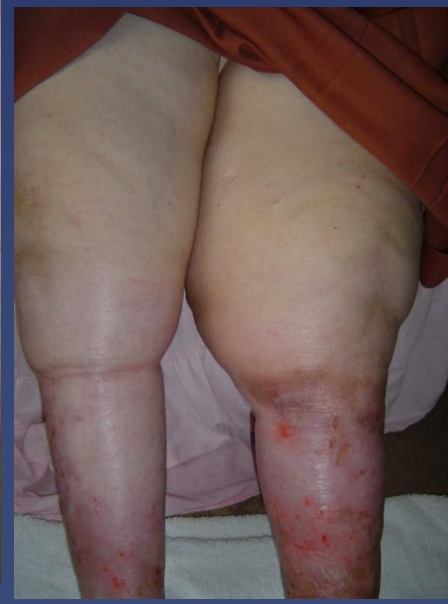


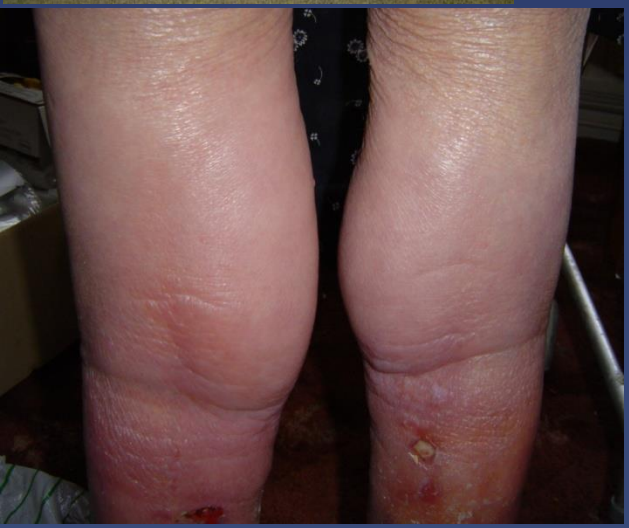




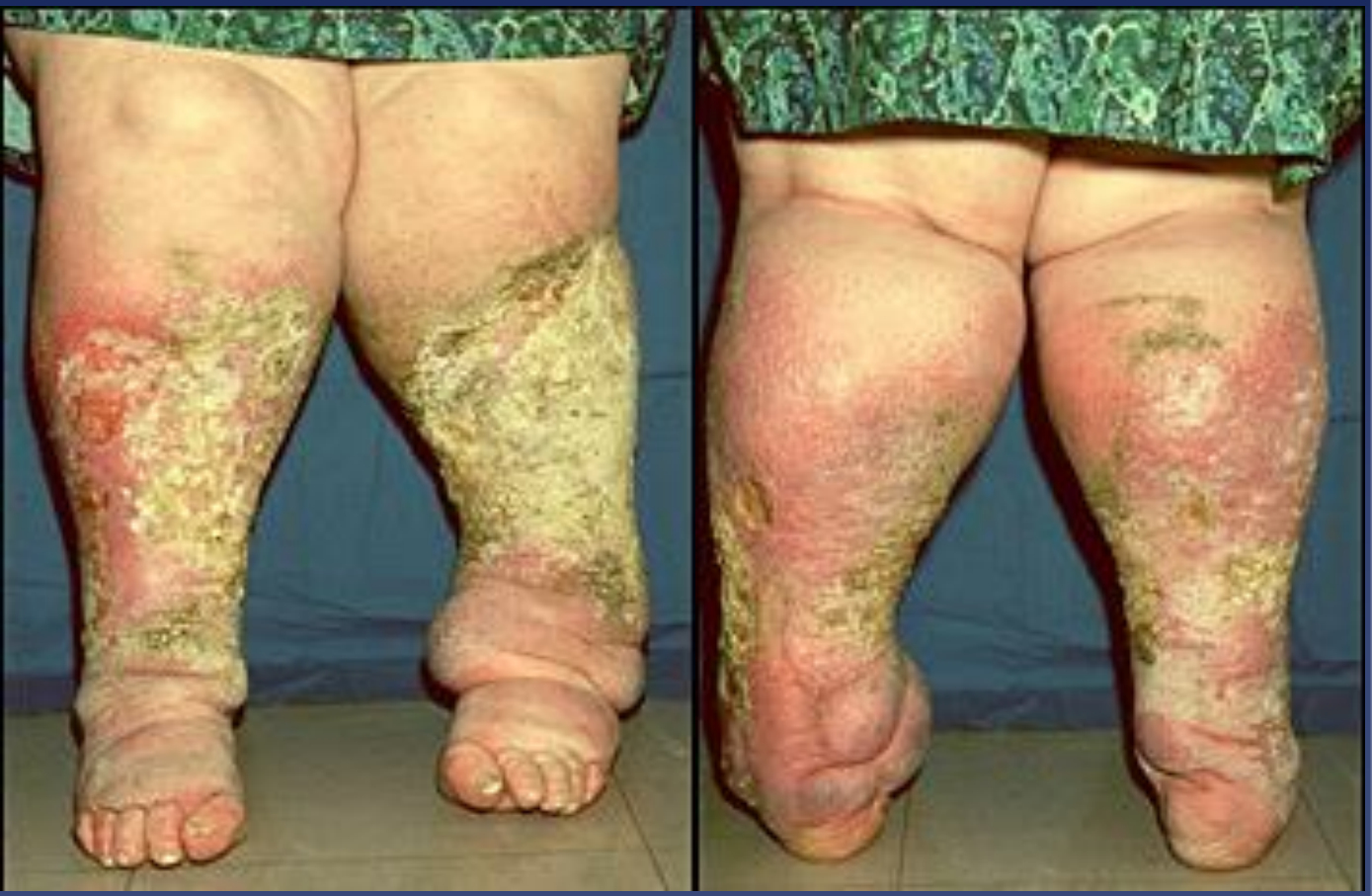




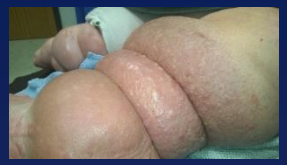
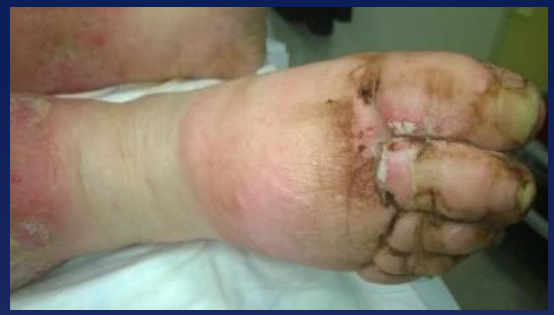
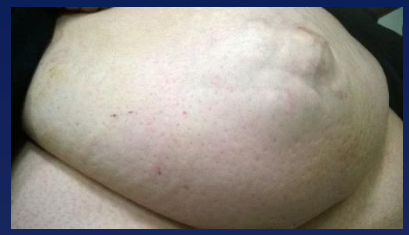


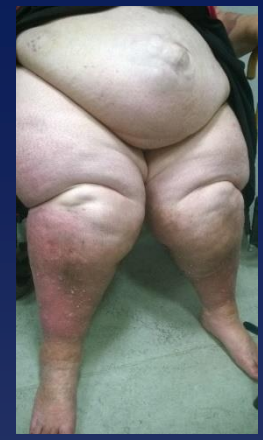
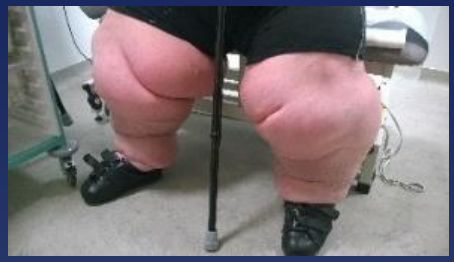


Other strategies for care

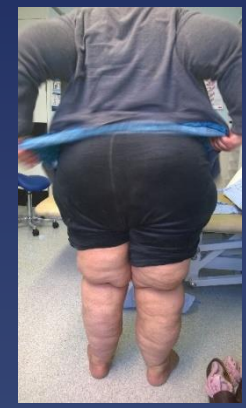


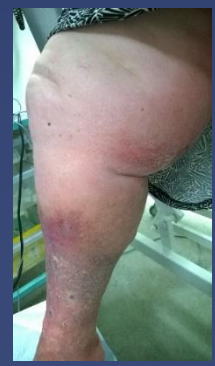
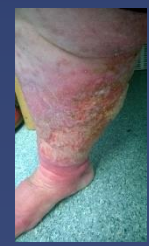
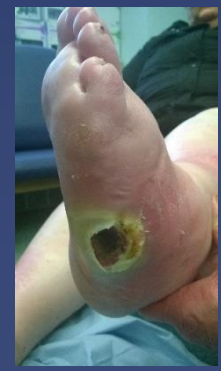
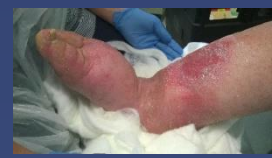
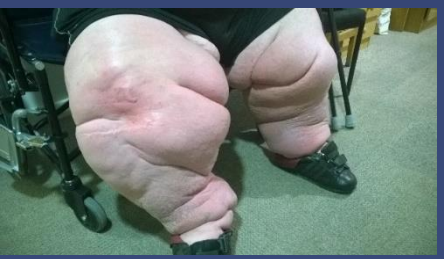
- **Exercise**
- **Elevation**
- **Social care**
- **Psychological support**
- **Pain management**
- **Bariatric referral**

Its really difficult and often discouraging for the patient and professionals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Thank You