

Pathophysiology

Soft tissue swelling due to the accumulation of interstitial fluid (all ECF excl plasma). Depends on balance of Starling forces: capillary & interstitial hydrostatic forces and plasma and interstitial oncotic pressures. Normally ~1L/hr made at arteriolar end of capillary bed and 85% reabsorbed at venule end. Remainder returned via lymphatics.

Oedema results from:

- ↑Filtration pressure by arteriolar dilatation, venous constriction, raised venous pressure
- ↑Capillary permeability
- ↓Oncotic pressure - hypoproteinaemia,
- ↓Lymphatic clearance.

Causes

Bilateral leg oedema

Generalised:

- CCF, liver failure, RF
- ↓Albumin, nephrotic syn
- Fluid administration
- Burns
- GIT disease: malabsorption, protein-losing enteropathy, IBD, tumours, coeliac's
- Salt retention, obesity
- Drugs
- High altitude illness
- Idiopathic oedema

Just legs:

- Immobility
- Varicose veins
- Pregnancy
- Intra-abdominal mass
- IVC thrombosis
- Intravascular mass
- Budd-Chiari syndrome
- Ca prostate

Unilateral leg oedema

- DVT
- Local infection, cellulitis, trauma, burns, stings
- Varicose veins
- Compression of large vein by tumour or LN
- Compartment syndrome
- A-V fistula
- Post-surgery: e.g. hip or knee replacement
- Reflex sympathetic dystrophy

Non-pitting lower limb oedema:

- Hypothyroidism (mucopolysaccharide deposition)
- Lymphoedema: surgical damage, radiation, malignant infiltration, infectious (e.g. filariasis), congenital (e.g. Turner's, Milroy's disease)
- Allergy: Increased capillary permeability: angio-oedema

Presentation

- Duration, distribution (dependency), assoc symptoms (e.g. SOB, leg pain), PMHx, meds
- Examination is directed towards local limb assessment + CVS & abdo in particular.

Investigations

Urine: ?proteinuria

Bloods: FBC, UEC, LFT, TFT

Imaging: CXR (heart size, lung Ca, effusion), USS Abdo & Duplex Doppler scan of limb/s, ±CT.

ECG/Echo: if heart failure is suspected

Other: Lymphoscintigraphy

Management

- Treatment is based on the cause.
- Empirical treatment with diuretics is inappropriate in the absence of a clear diagnosis.