

51ST VEITH symposium
 Session 72: LIPEDEMA, LYMPHEDEMA, PHLEBOLYMPHEDEMA
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Lower Extremity Edema Workup

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Disclosures

No Disclosures

Definition

edema – fluid retention in soft tissues
 ["Οίδημα", Ancient Greek]

edema = oedema

phlebedema

lipedema

myxedema

angioedema

phlebolymphe~~de~~ma

lymphedema

scleredema

any other edema

Definition (Part 1)

Excessive accumulation of fluid in interstitial space

The Vein Glossary

THE VEIN GLOSSARY

Maxim E. Shaydakov, MD, PhD, RPVI
 University of Pittsburgh Medical Center

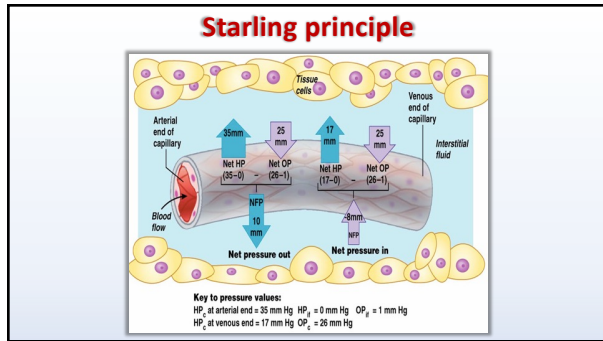
Limb swelling due to **increased venous pressure** that progressively stretches the venule and capillary wall, thereby increasing its permeability, resulting in peripheral edema, observed **mainly in the evening**. It is relieved by elevating the legs, **using compression** stockings, or taking venoactive drugs. Venous edema occurs as a result of both superficial and deep venous insufficiency (C3 of the CEAP classification). In chronic venous insufficiency, **lymphatic drainage from the legs becomes overloaded** and may decompensate secondarily, aggravating phlebedema.

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Definition (part 2)

**Capillary filtration
exceeds the limits of Lymphatic drainage**

Differential

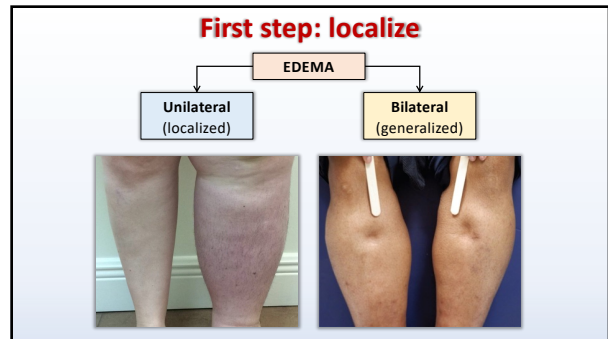
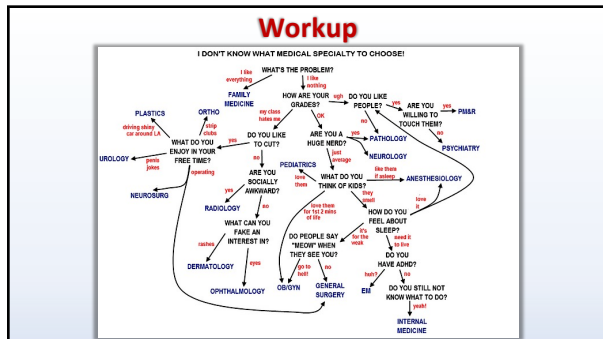
- Obesity / malnutrition
- Cancer
- Inflammation
- Infection
- Autoimmune disorders
- Trauma / burns
- Surgery

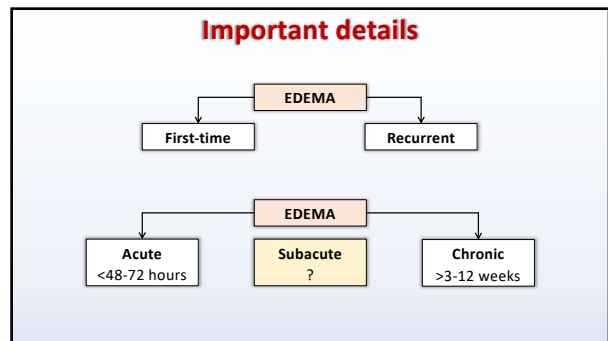
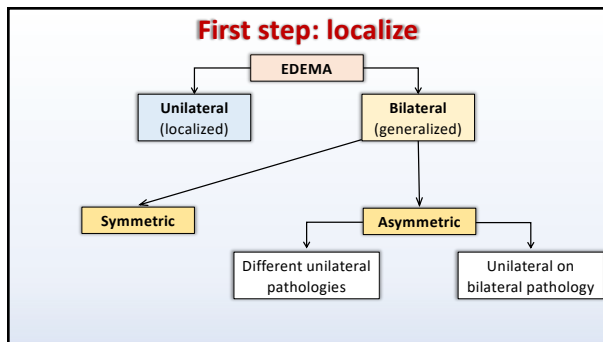
- Cardiovascular (CHF, PAH)
- Venous & Lymphatic
- Respiratory (COPD, emphysema)
- Digestive (malabsorption, cirrhosis)
- Renal
- Endocrine (DM, thyroid)
- Musculoskeletal

- Medications


- High salt intake
- Prolonged sitting or standing
- Pregnancy / premenstrual
- Aging

•R60: Edema, not elsewhere classified
 •R60.0: Localized edema
 •R60.1: Generalized edema
 •R60.9: Edema, unspecified






Important details



- pain
- restless leg
- cramps
- claudication
- itching
- heaviness




Acute bilateral edema

AHF

Acute nephrotic syndrome

Medications
(CCBs, NSAIDs, gabapentin, chemotherapy, hormones, dihydropyridine, vasodilators)

DVT

Acute unilateral edema

- DVT
- Thrombophlebitis
- Compartment
- Cellulitis
- Trauma
- Lymphangitis
- Ruptured Baker's cyst

Chronic bilateral edema

Systemic

- Cardiac: CXR, BNP, Echo
- Respiratory: polysomnography
- Liver: LFTs, albumin, US
- Renal: Crea/BUN, UA, US
- Endo: TSH, T3/T4
- Pregnancy test
- BMI, review medications

Regional

Pelvic process: US/CT/MRI
 IVC syndrome: US/CT/MRI
 Inguinal process: US/CT/MRI


"Idiopathic?"

Session 72: LIPEDEMA,
 LYMPHEDEMA,
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Chronic bilateral edema

"Idiopathic?"

Chronic bilateral edema



"Idiopathic?"

Chronic unilateral edema

~2/3
have a venous / lymphatic disorder¹

1. Dean SM et al. The clinical characteristics of lower extremity lymphedema in 440 patients. J Vasc Surg Venous Lymphat Disord. 2020 Sep;8(3):851-859.

Chronic unilateral edema

- D-Dimer
- Duplex US for DVT
- Duplex US for reflux
- CTV / MRV
- Venography + IVUS
- Lymphoscintigraphy / ICG lymphography
- Plethysmography

~2/3
have a venous / lymphatic disorder¹

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Third step: classify


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CVI (C3)
CEAP, VCSS, QoL

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CEAP, VCSS, QoL

Lymphedema



Stage 1 Stage 2 Stage 3 Stage 4

Third step: classify

CVI (C3)
CEAP, VCSS, QoL

Lipedema

Lymphedema

Third step: classify

CVI (C3)
CEAP, VCSS, QoL

Lipedema

Lymphedema

2024 ACC/AHA/AACVPR/APMA... Guidelines

Recommendations for Resting ABI and Additional Physiological Testing (Continued)

COR	LOE	Recommendations
2a	B-NR	3. In patients at increased risk of PAD (Table 5), screening for PAD with the resting ABI, with or without ankle PVR and/or Doppler waveforms, is reasonable. ⁴⁻⁹
3: No Benefit	B-NR	4. In patients not at increased risk of PAD (Table 5) and without history or physical examination findings suggestive of PAD (Table 6), screening for PAD with the ABI is not recommended. ^{10,11}

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Table 5. Patients at Increased Risk for PAD

Age ≥65 y
Age 50-64 y, with risk factors for atherosclerosis (eg, diabetes, history of smoking, dyslipidemia, hypertension), chronic kidney disease, or family history of PAD ¹⁰
Age <50 y, with diabetes and 1 additional risk factor for atherosclerosis
Individuals with known atherosclerotic disease in another vascular bed (eg, coronary, carotid, subclavian, renal, mesenteric artery stenosis, or AAA)

Thank you!