



Subject: CVS-pathology

Topic: Veins and Lymphatics

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## Pathology 3 “veins and lymphatics” – summary :)

we will start with the pathology of veins :

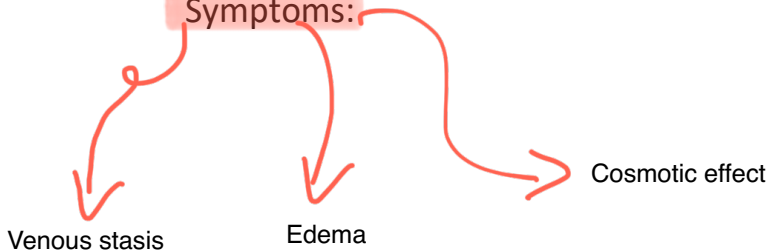
### 1- Varicose veins :

**Definition** -> abnormally dilated, tortuous veins produced by prolonged 1 increase in intra-luminal pressure and loss of vessel wall support. 2

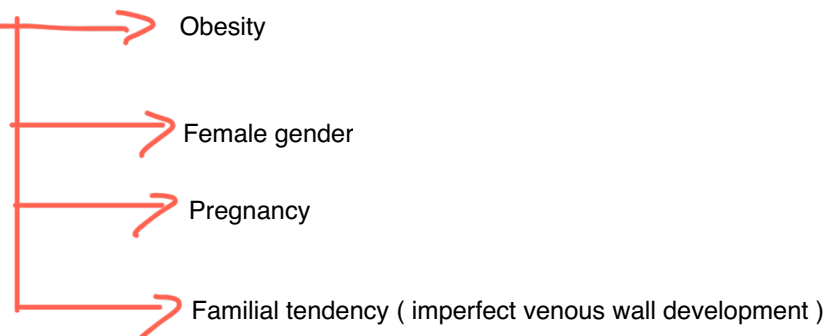
Most commonly seen in -> superficial veins of the leg

10% to 20% of adult males and 30% of adult females develop lower extremity varicose veins

#### Symptoms:

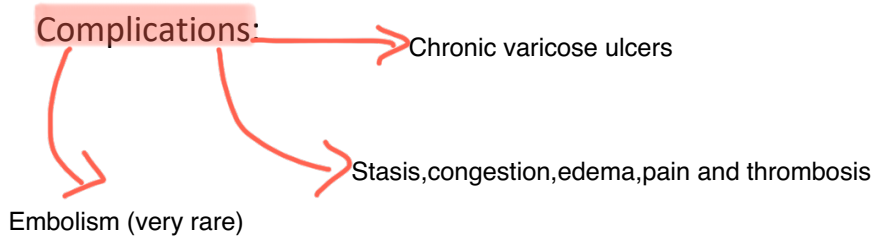


#### Risk factors:



#### Microscopic morphology:

- 1- Vein wall thinning
- 2- intimal fibrosis in adjacent segments
- 3- spotty medial calcification (phlebosclerosis)
- 4- Focal intraluminal thrombosis
- 5- venous valve deformities(rolling and shortening)

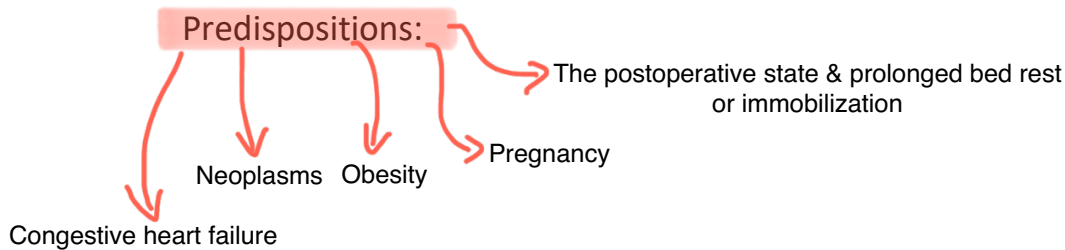


## 2- THROMBOPHLEBITIS & PHLEBOTHROMBOSIS

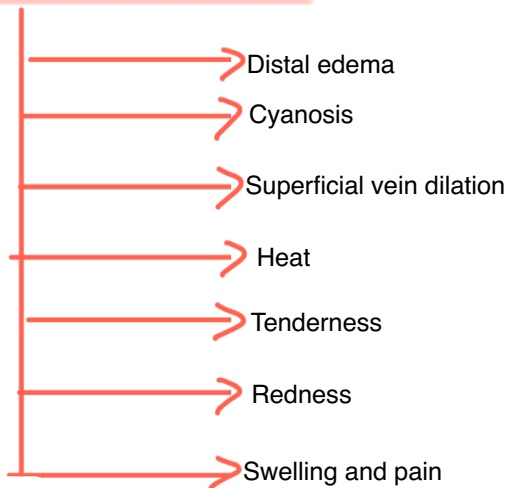
**Definition :** Inflammation + thrombosis of veins

Most commonly seen in deep leg veins

**\*\*Thrombophlebitis of upper limb veins** are usually associated with local risk factors like: <sup>1</sup>catheter or canula site; or in some cases can be associated with <sup>2</sup>systemic hypercoagulabilities.



### Local manifestations :



## Special thrombophlebitis types:

Migratory thrombophlebitis (Trousseau sign)	hypercoagulability occurs as a paraneoplastic syndrome related to tumor elaboration of pro-coagulant factors (e.g. colon cancer; pancreatic ca; etc...)
THE SUPERIOR VENA CAVAL SYNDROME	<ul style="list-style-type: none"><li>*caused by neoplasms that compress or invade the superior vena cava</li><li>*Most common is lung cancer</li><li>*marked dilation of veins of head, neck, and arms with cyanosis</li></ul>
INFERIOR VENA CAVAL SYNDROME	<ul style="list-style-type: none"><li>*caused by neoplasms compressing or invading inferior vena cava (m/c: hepatocellular carcinoma and renal cell carcinoma) striking tendency to grow within veins</li><li>*marked lower extremity edema, distention of the superficial collateral veins of the lower abdomen (medusa)</li></ul>

Now let's start with the pathology of lymphatics :

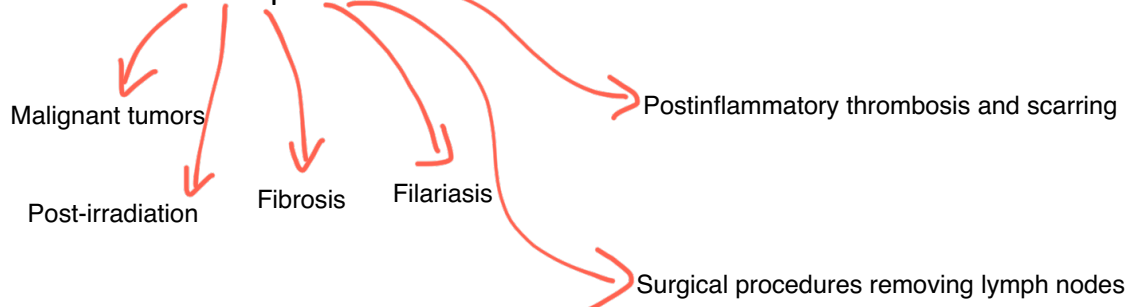
### 1- Lymphedema

#### Primary (congenital) lymphedema

can occur as: → Lymphatic agenesis or hypoplasia

Secondary (obstructive) lymphedema → blockage of a previously normal lymphatic

examples:



## 2- LYMPHANGITIS

Definition: acute inflammation due to bacterial infections spreading into lymphatics

Most common : group A  $\beta$ -hemolytic streptococci.

Clinical features:

- 1- lymphatics are dilated and filled with an exudate of neutrophils and monocytes.
- 2- red, painful subcutaneous streaks (inflamed lymphatics), with painful enlargement of the draining lymph nodes (acute lymphadenitis).
- 3- Sometimes, subsequent passage into the venous circulation can result in bacteremia or sepsis.

## 3-CHYLOUS :

Definition: Milky accumulations of lymph in various body cavities

Caused by -> rupture of dilated lymphatics, typically obstructed secondary to an infiltrating tumor mass

Types :

