

# **Varicose veins**

# **Varicose veins (student 2016 )**

**This includes :**

- Definition**
- Anatomy of lower limb venous system**
- Physiology of lower limb venous drainage**
- Types of varicose veins ( etiological types )**

**primary vv**

**secondary vv**

- . Clinical picture of varicose veins:**

  - Clinical picture of primary vv**

  - clinical picture of secondary vv**

- . Complications of vv**

- . Investigations for vv**

- . Treatments of vv**

# Definition of varicose veins

**\*Varicose veins means dilatation and tortiousity of the vein**

**\*Some sites have special names e.g.**

Anal canal  piles

Spermatic cord  varicocele

Gastro-oesophegial junction  varices

Around umbilicus  Capamedosa

**\*When we use varicose veins we mean dilatation of the superficial veins of the lower limbs**

# **Surgical anatomy of the lower limbs veins**

**Veins of the lower limbs :**

**1 Superficial veins**

**2 Deep veins**

**3 Perforators**

**4 Comunicators**

# Superficial veins

# Deep veins

# Perforators veins



# Communicator veins

# Physiology of lower limbs venous drainage

# **Etiological types of varicose veins**

**primary or secondary**

**Primary varicose veins is the commonest**

# 1- secondary varicose veins

- It is either due to arteriovenous fistula, or obstruction of the deep veins
- 1- secondary to AVF

**2- secondary to deep venous system obstruction:**

## **2- primary varicose veins**

### **predisposing factors**

## **Precipitating factors :**

- 1- prolonged standing**
- 2- hormones**
- 3- pregnancy**
- 4- sustain muscular contraction**

# Clinical picture of varicose veins

**we will discuss the clinical picture of primary vv ,then the deference  
Between it and the secondary vv**

## **1- symptoms of varicose veins:**

- a) swelling in the lower limb**
- b) pain**
- c) mild lower limb edema**
- d) mild itching**



**2- sings of varicose veins ;**

**The is lower limb swellings**

**Number**

**Usually multiple**

**Site**

**It can occurs at at any site of the limb but the is sites of predilection**

**Size**

**From millimeters to few cintemeters**

## Shape

It may be tubular



**serpentine**



**spider in shape**



# Telangiectasias



- Also known as “spider veins” due to their appearance
- Evolve from capillaries or early venules
- Blue-to-red
- < 1 mm in caliber
- Very common, especially in women
- Increase in frequency with age
- 85% of patients are symptomatic\*
- May indicate more extensive venous disease

*\*Weiss RA and Weiss MA J Dermatol Surg Oncol.  
1990 Apr;16(4):333-6.*

# Reticular Veins



- Dilated bluish intradermal veins
- Frequently associated with clusters of telangiectasias
- 1mm – < 3mm in diameter
- Usually tortuous
- Venulectasias, blue-veins, intradermal varicies
- May be symptomatic, especially in dependent areas of leg

## Saccular dilatation







**Surface**

**Edge**

**Consistency**

**Color**

**Temperature**

**Painful or not**

**Tender or not**

**Relation to the surrounding structure**

**Special characters**

# **Difference of primary from secondary varicose veins**

# Complications of vv

This includes:

- .bleeding**
- . Superficial thrombophlebitis**
- . Deep venous thrombosis**
- . Dermatitis**
- . Ezema**
- .pigmentation**
- . Lipodermatosclerosis**
- . Venous ulcer**
- . Malignancy**
- . Talipes**

# Investigations for vv

**This includes:**

# Treatments of vv

This includes:

- . Conservative treatment
- . Injection sclerotherapy
- . Dermal laser
- . Surgery
- . End luminal radiofrequency ablation
- . End luminal laser ablation

# Conservative treatment

**Advice the patient to avoid**

**Advice the patient to**

**Compression therapy**

**Venotonic drugs**



## **Advice the patient to avoid**

- . Prolonged standing**
- . Exposure to heat**
- . Contraceptive pills**
- . Repeated pregnancies**
- . Excessive salt intake**

## **Advice the patient to**

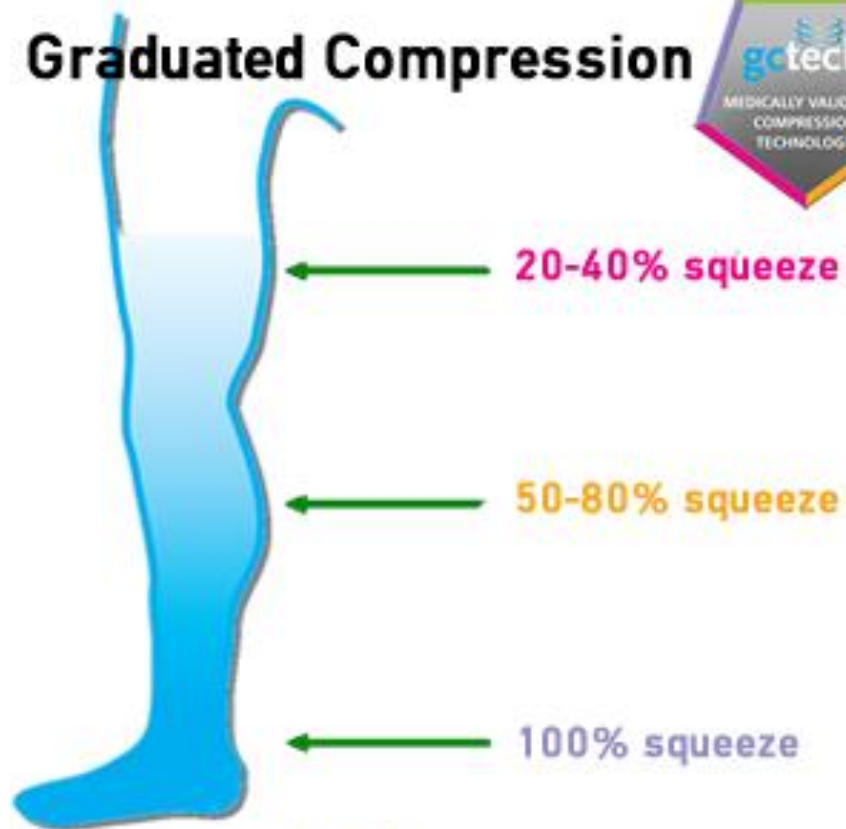
- . Do Sports**
- . Decrease of weight**
- . Leg elevation**
- . Use intra uterine device**

## **Compression therapy**

### **Elastic stocking**

**this is done by graduated elastic compression stockings which exerts 40 mmHg at the ankle and 20 mmHg just below knee**

## Graduated Compression



  
**compressionadvisory**<sup>TM</sup>  
therapeutic compression apparel

# Injection sclerotherapy

**This includes:**

- . The idia of injection sclera therapy**
- . The indications of sclerotherapy**
- . Contraindications of sclerotherapy**
- . Limitations**
- . Sclerosing materials**
- . The procedure**
- . Instructions after the procedure**
- . complication**

# **The idea of sclerotherapy**

# **The sclerosing materials**

Agent	Manufacturer	Category	FDA Approval	Strength	Advantages	Disadvantages
Hypertonic saline	Multiple	Osmotic	Off-label use	++	Low risk of allergic reaction, wide availability, rapid response	Off-label, painful to inject, hyperpigmentation, necrosis, rapid dilution, not recommended for facial veins
Sclerodex (hypertonic saline and dextrose)	Omega Laboratories, Canada	Osmotic	Not approved	++	Low risk of allergic reaction, low risk of necrosis, high viscosity	Not FDA approved, stings when injected, hyperpigmentation
Chromex (72% chromated glycerin)	Omega Laboratories, Canada	Alcohol	Not approved	+	Low incidence of hyperpigmentation, necrosis, and allergic reaction	Not FDA approved, weak sclerosing agent, highly viscous and painful to inject, may cause hematuria at high doses
Nonchromated glycerin	Compounded at pharmacy	Alcohol	Off-label use	+	Low incidence of hyperpigmentation, necrosis, and allergic reaction	Weak sclerosing agent, typically only used for telangiectases
Scleromate (sodium morrhuate)	Glenwood, LLC, USA	Detergent	Approved	+++	FDA approved	High incidence of skin necrosis and anaphylaxis
Sotradecol (sodium tetradecyl sulfate)	Bioniche Pharma, USA (distributed by AngioDynamics, Inc.)	Detergent	Approved	+++++	FDA approved, low risk of allergic reaction, potent sclerosant	Potential necrosis with extravasation, matting of telangiectases
Aethoxysklerol (polidocanol)	Kreussler Pharma, Germany	Detergent	Not approved	+++	Very low risk of allergic reaction, painless to inject	Not FDA approved, associated with matting of telangiectases

FDA, Food and Drug Administration.