

# Chronic venous insufficiency

This is the most common complication of venous varicosity. The term is used for signs and symptoms associated with chronic venous hypertension.

## Pathogenesis

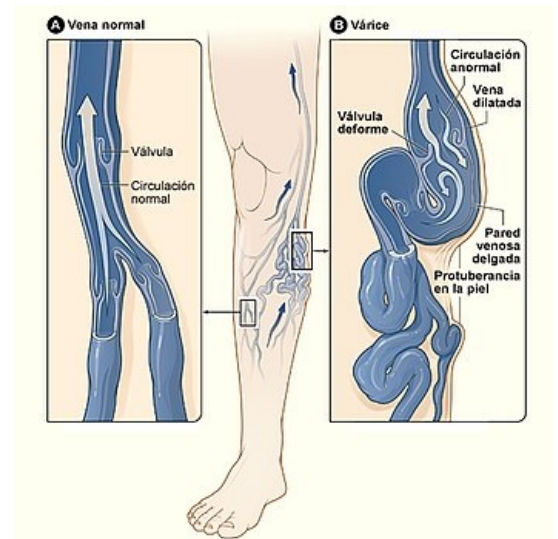
The basis of formation is the rise of pressure, which arose as a result of valence incompetence, reflux, obstruction.. The most serious forms are found in post-thrombotic syndrome, milder forms are caused by varixes. **In 80% it results from deep vein thrombosis** (such as post-phlebitic syndrome), in the other 20% primary varicose, valve agens and congenital AV shorts are applied. The main factors for this are two - **muscle pump failure and valvular insufficiency** with reflux. It can be in the compensated form - the muscle pump is able to cope with volume overload, or decompensated form - skin changes - the muscle pump can no longer cope, venous hypertension develops.

## Clinical picture

A classic sign is a **permanent swelling** that does not respond to the lying position. He is often accompanied by **skin hyperpigmentation, eczema, subcutaneous fibrosis** (lipodermatosclerosis), **white atrophy and ulceration**, as well as **pressure and tightness in his limbs** and night cramps. Another manifestation may be called corona phlebectatica - **dilated red to blue veins** at the inner ankle. At the most severe stage of insufficiency, ulcus cruris occurs.



Varices on the right lower limb



Varices scheme on the lower limb

The CEAP classification is used for clinical characteristics:

<b>C - clinical classification:</b>	
C0	No visible or palpable signs of venous disease
C1	Teleangiectasia, reticular varices
C2	Varices of tribal veins
C3	Swelling
C4a	Pigmentation, eczema
C4b	Lipodermatosclerosis, white atrophy
C5	Healed ulcer
C6	Active ulcer
S	Symptomatic
A	Asymptomatic
<b>E - etiological classification:</b>	
Ec	congenital
Ep	primary
Es	secondary
En	no venous etiology
<b>A - anatomical classification:</b>	
As	surface veins
Ap	perforators
Ad	deep veins
An	no vein localisation found
<b>P - pathophysiological classification:</b>	
Pr	reflux
Po	obstruction
Pr,o	reflux and obstruction
Pn	undetected

## Therapy

### Conservative

- in postthrombotic syndrome - warfarin to prevent relapse of thrombosis
- **lifestyle changes** (exercise, weight reduction, regular faeces...)
- **compression, venotonics**

### Sclerotherapy

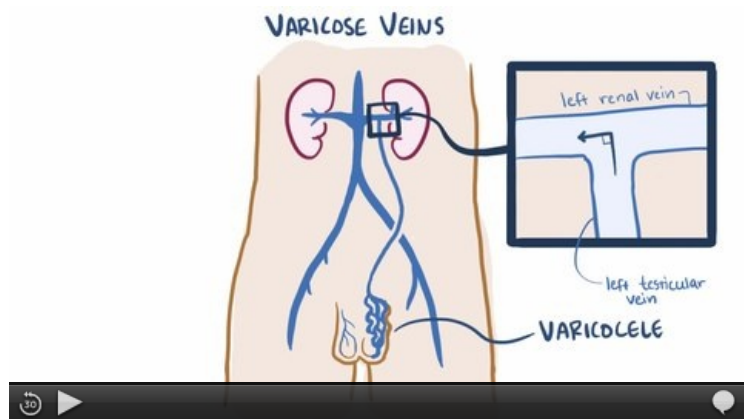
### Surgical

- removal of varicose veins, interruption of perforators,...
- Palme reconstruction - at the closure of the external or communal pelvic vein, the v. femoralis on the affected side is sewed crosswise in the v. saphena magna from the other side

## Skin changes

Skin changes are divided into 3 grades:

- **Grade 1** - corona phlebectatica paraplantaris, perimaleol edema;
- **Grade 2** - swelling of the lower limb, skin changes (hyperpigmentation, dermatitis varicosa, hypodermatitis, dermatosclerosis);
- **Grade 3** - ulcer cruris venosum.



Definition, pathogenesis, symptoms, complications, treatments.

## Ulcus cruris venosum

It is a chronic leg ulcer, the predilection point being the landscape above the ankles. It arises as a result of chronic venous insufficiency. Otherwise, quite trivial trauma tends to be a provocative factor.

### Treatment of leg ulcer

Treatment has to be complex.

- **walking with compression** (intermittent pneumatic compression regarding immobile patients)
- **external treatment**
  - poultices with chloramine, surrounding ulcers with poultices with zinc paste, gentian violet, enzyme preparations (collagenase)
  - apply granulating (AgNO<sub>3</sub>) and then epithelising agents (boric grease) to cleaned ulcers
- **surgical treatment**
  - ligation of an insufficient perforator, extirpation of massive varicose
  - excision of callosal edges of ulcers
  - transplantation of skin graft
- **farmacotherapy** – pentoxifylline

## References

### Referenced articles

- Venopharmacy
- Primary and secondary venous insufficiency

### Sources

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- ČEŠKA, Richard, ŠTULC, Tomáš, Vladimír TESÁŘ a Milan LUKÁŠ, et al. *Interna*. 3. edition. Stanislav Juhaňák - Triton, 2020. 964 pp. pp. 239-242. ISBN 978-80-7553-780-5.