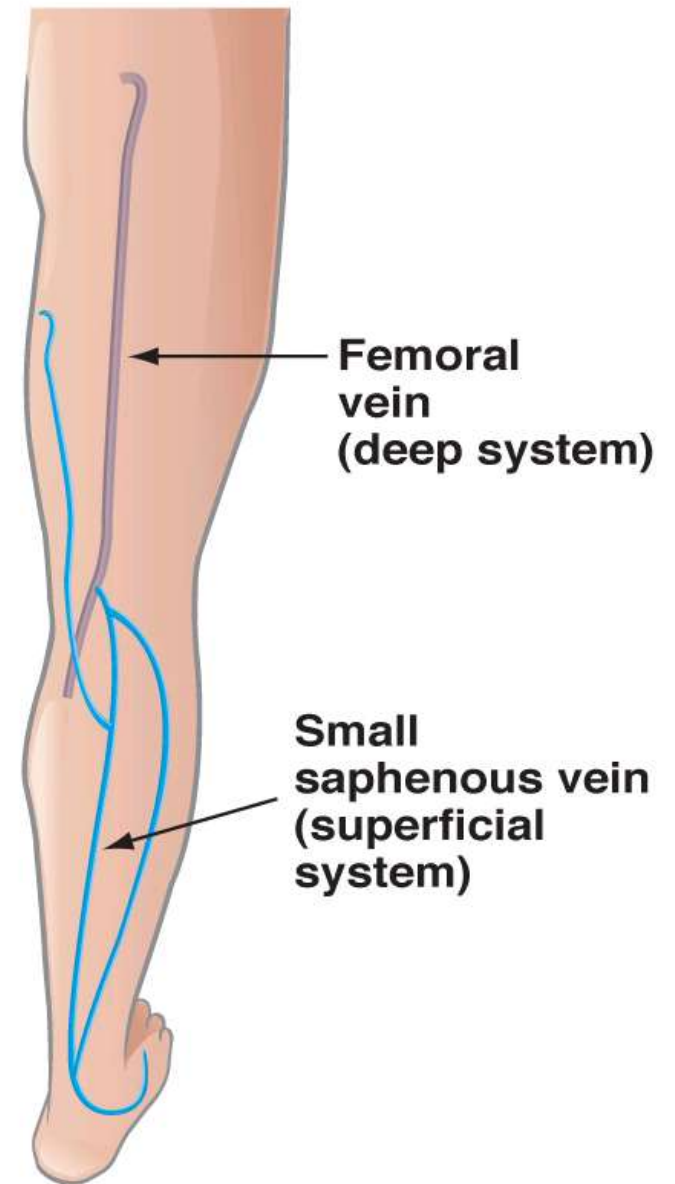
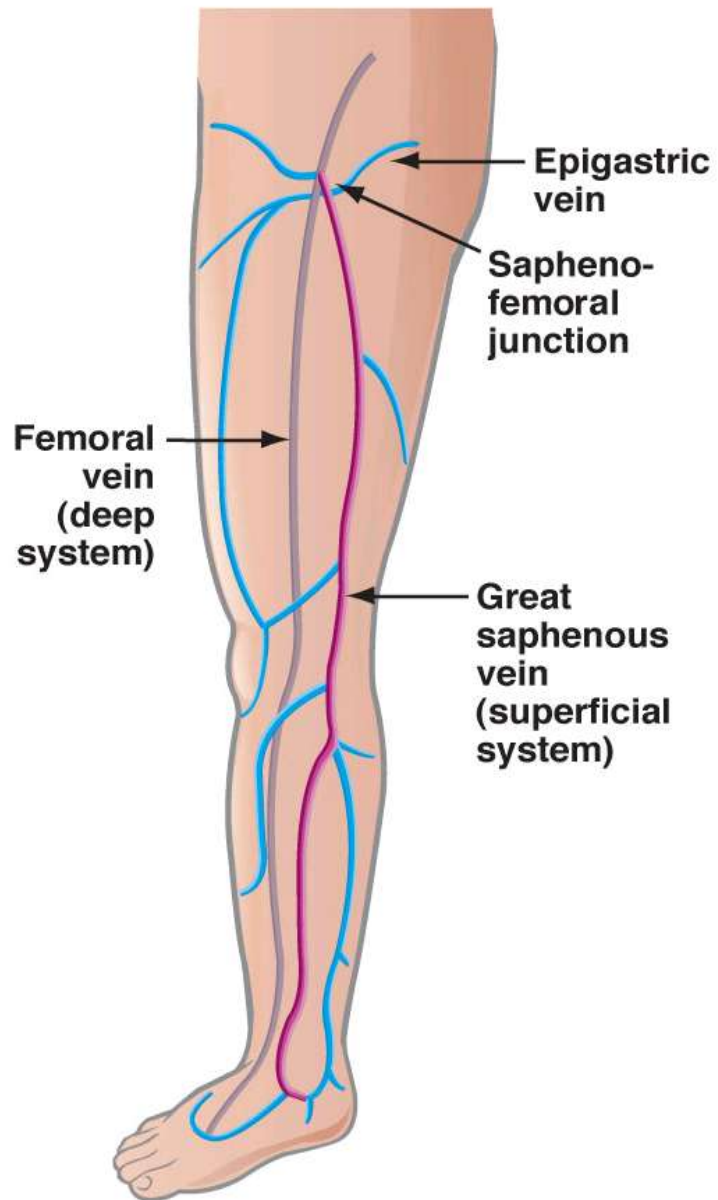
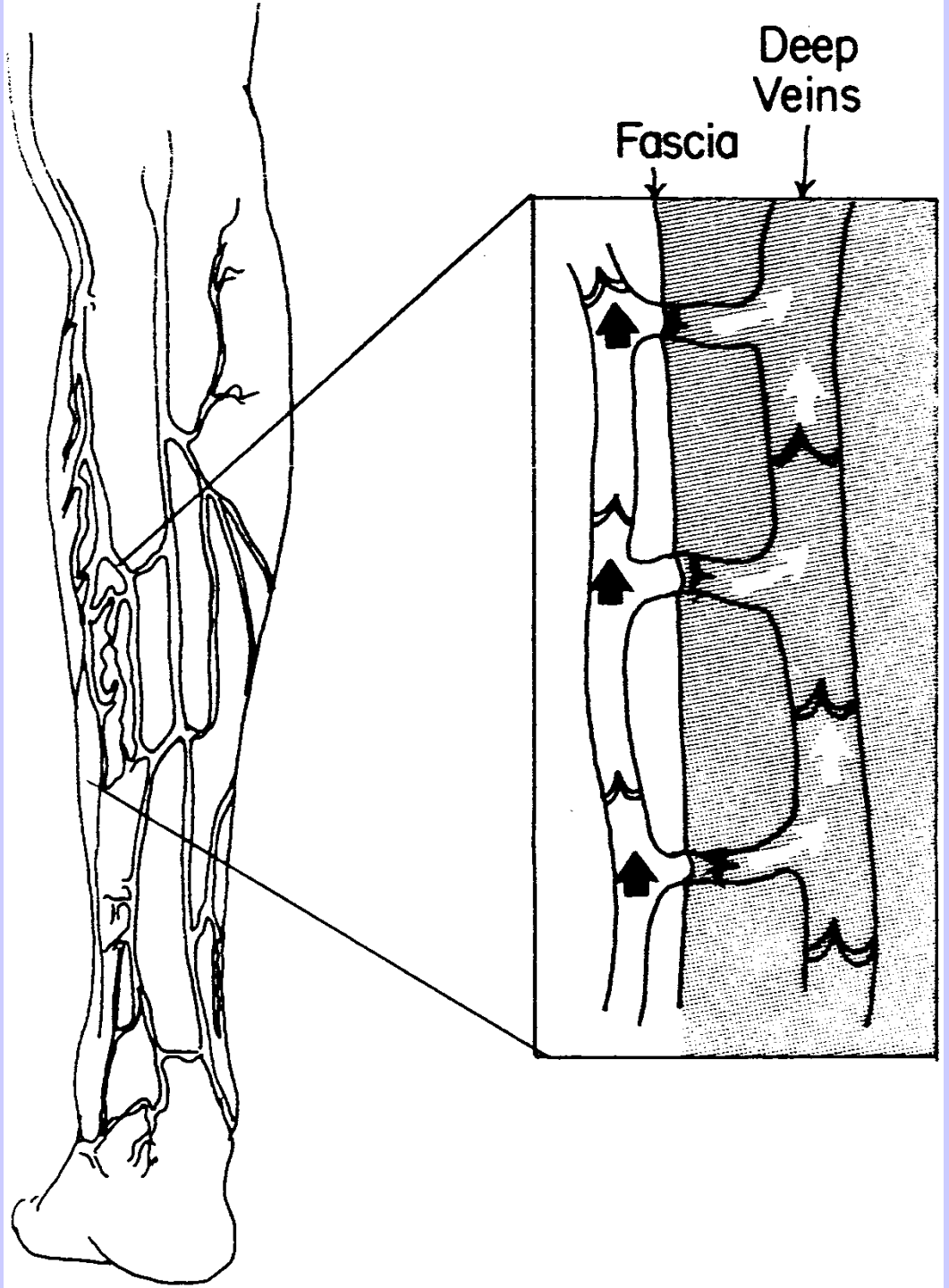
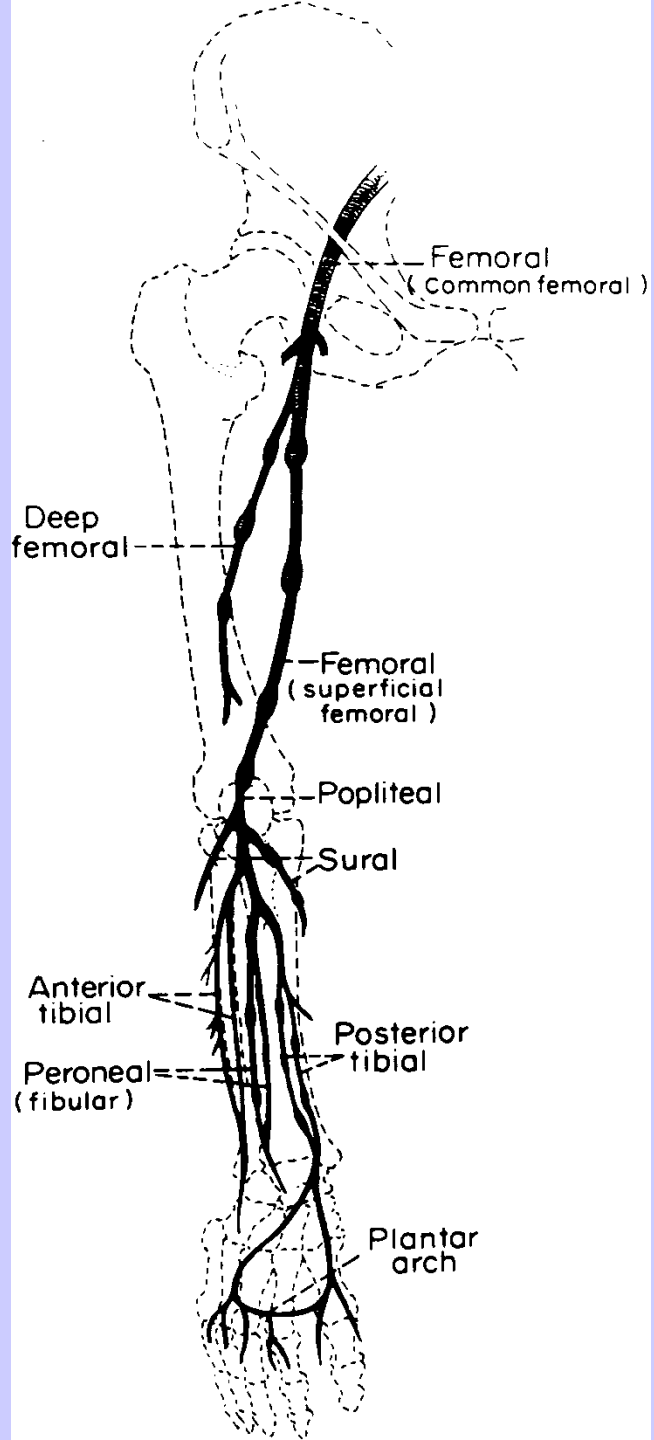


VE NE

# Anatomie

- *Vene profunde*( omonime arterelor)
- *Vene de legatura*
  - **anastomotice**      intre vene profunde  
                                      intre tr safene(v Giacomini)  
                                      pe aceeaasi vena
  - **comunicante**      directe  
                                      indirecte
  - **plonjante Delater**
- *Vene superficiale*



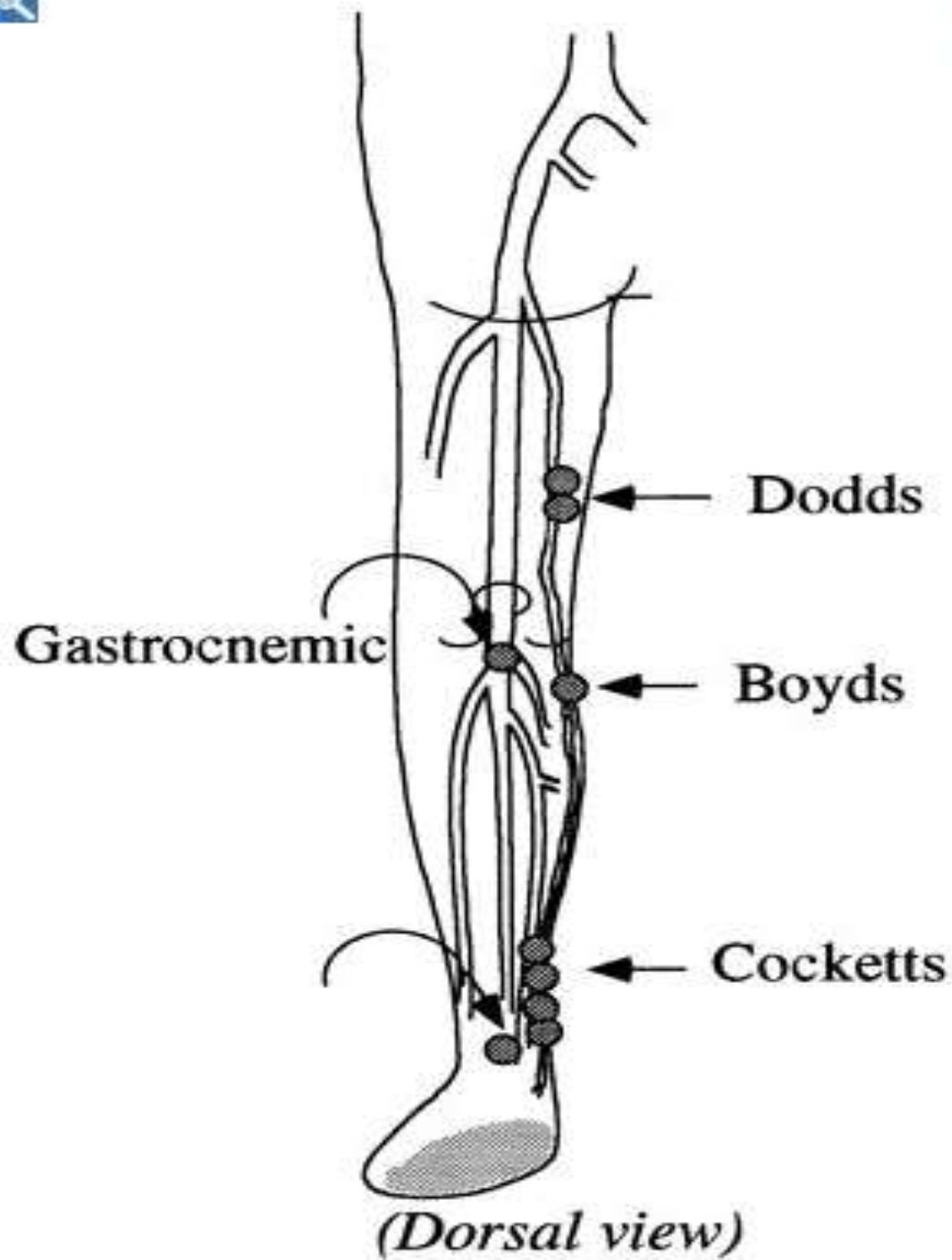


- In cazul venelor de legatura rol important vene :

### *1.Perforante*

- safeno femural
- hunterian( Sherman)
- safeno popliteu( Linton Dodd)
- punct solear
- triceps sural
- 1/3 infero intern al gambei( Cockett)

### *2.Plonjante Delater*



# Fiziologie

- 2 functii
  - circulatie de intoarcere
  - rezervor de sange
- viteza de circulatie 10cm/s

# Fiziologie

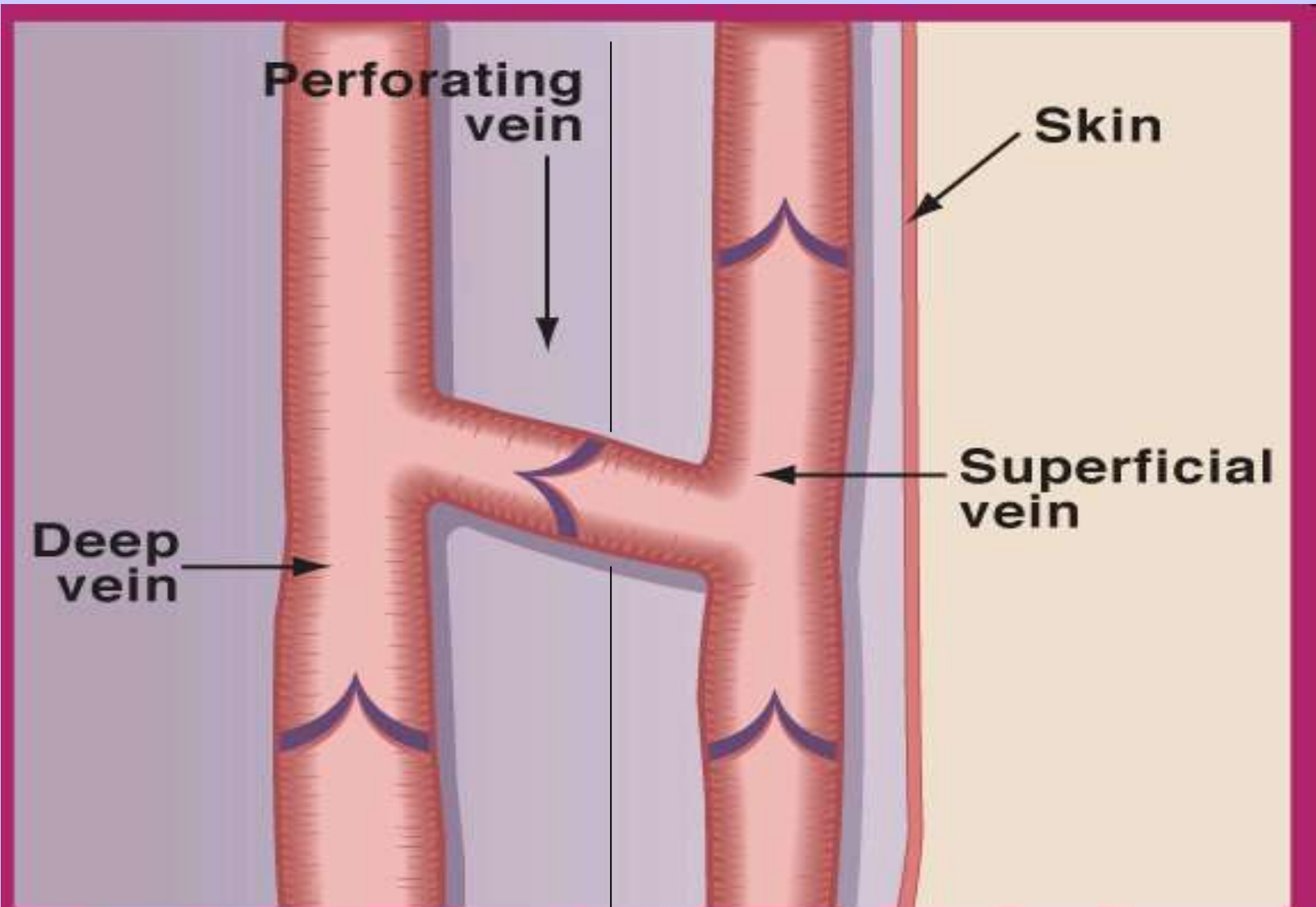
- **Factori favorizanti**

1. Pres sist reziduala( *vis a tergo*)
2. Contractia musculara
3. Joc valvular
4. Aspir.toracica( *vis a fronte*)
5. Venomotricitatea

- **Factori defavorizanti**

1. Forta gravitacionala
2. Vascozitatea
3. Presa abdominala



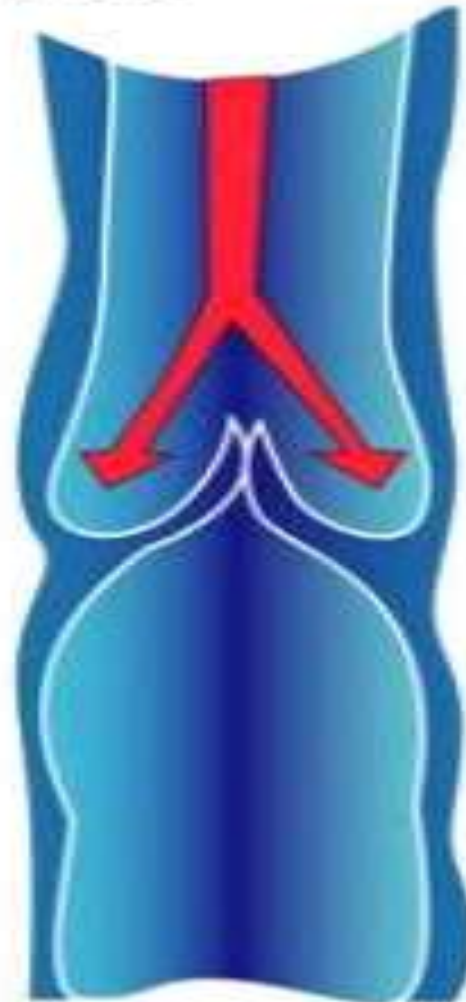


**Perforating veins connect the deep system with the superficial system**

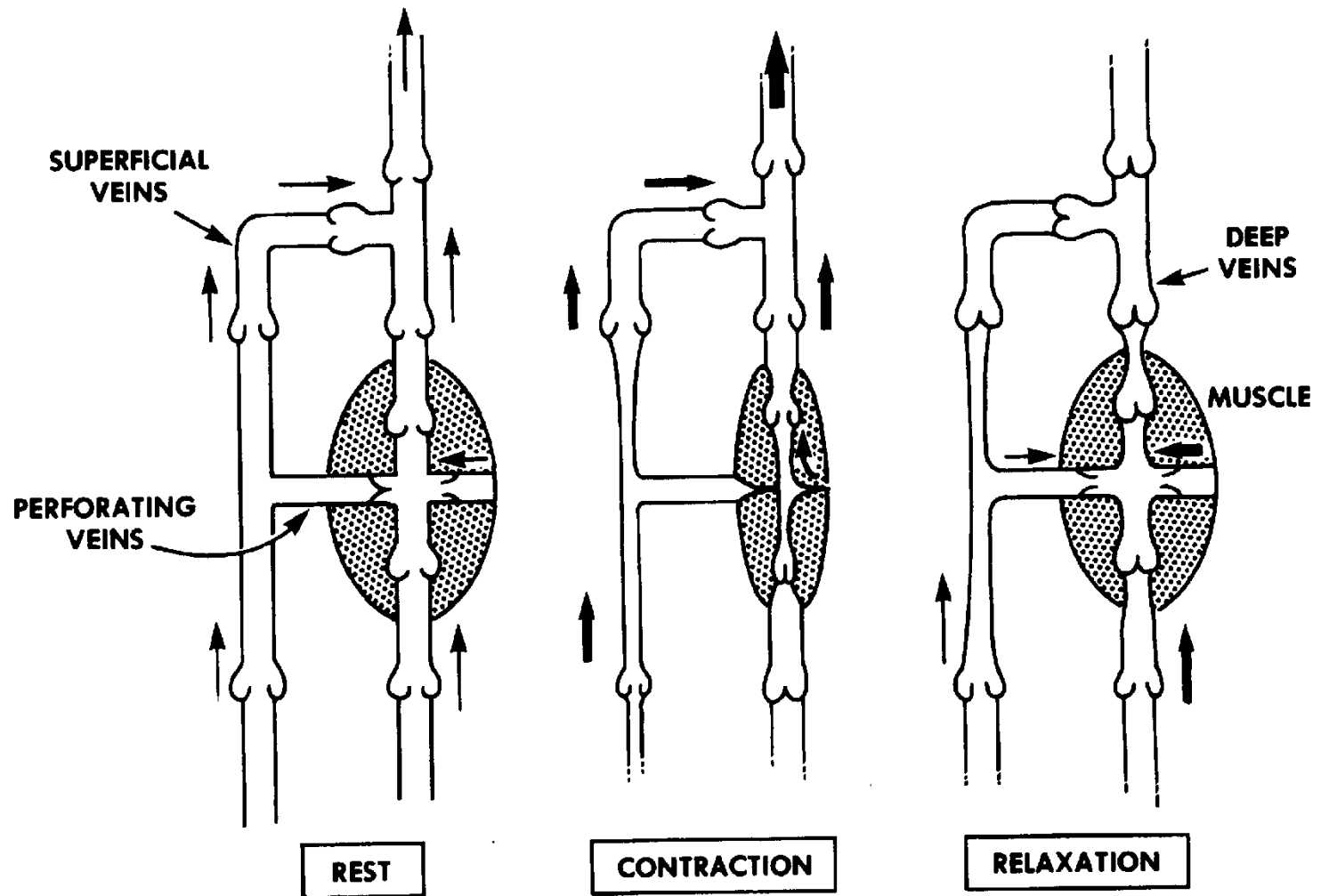
# Normal One-Way Vein Valves



Blood flowing  
to heart



Healthy valve  
prevents reverse  
blood flow



# Fiziologie

- 80-90% din sangele venos prin sist profund
- in repaus pres in 1/3 gamba este 90 cm H<sub>2</sub>O  
in miscare scade la 20 cm H<sub>2</sub>O si creste  
dupa 1-2 min
- repaus valve intredeschise este masurata  
inaltimea coloanei de sange
- in miscare valvele sunt eficiente si nu lasa  
singele sa cada

# Etiologie

## **I. Varice secundare( castigate)**

- compresiune ←—— tumori abdominale
- trombozelor profunde
- traumatisme
  1. Valvei ostiale
  2. Fistule a-v posttraumatice

# Etiologie

## II. Primitive

### *1. Congenitale*

- sdr Klippel Trenaunay creste in lungime  
varice importante  
nevi vascolari
- sdr Parkes Weber fistula a-v

# Etiologie

## *2. Castigate*

- graviditate
- obezitate
- ortostatism
- caldura

# Patogenie

- **Varice secundare**
  - compresiune crește presiunea venoasă



- traumatisme distruție valvulară
- tromboză profundă- crește pres
- repermeabilizări

# Patogenie

- **Varice primitive** exista 3 teorii
  - Mecanica anatomia venelor fara suport muscular  
fora gravitacionala
  - Anatomopatologica lez parietale
  - Hidrostatica cresterea presiunii venoase

# Anatomie patologica

- *Macroscopic*

modif de calibru

alungirea venei

hipertrofie

in final se subtiaza

neregulata dilatata

calcificari

periflebita

- *Microscopic*

hiperplazie endoteliu

inlocuit de collagen

tunica mijlocie hipertrof  
musculara

adventice lez nervoase si  
vasa vasorum

# Anatomie patologica


- Initial dezvoltării tunicilor musculare și cele circulare
- zone de atrofie scleroasă
- astfel dispăre progresiv tunică medie și internă sunt înlocuite de tracturi fibroase

# Anatomie patologica

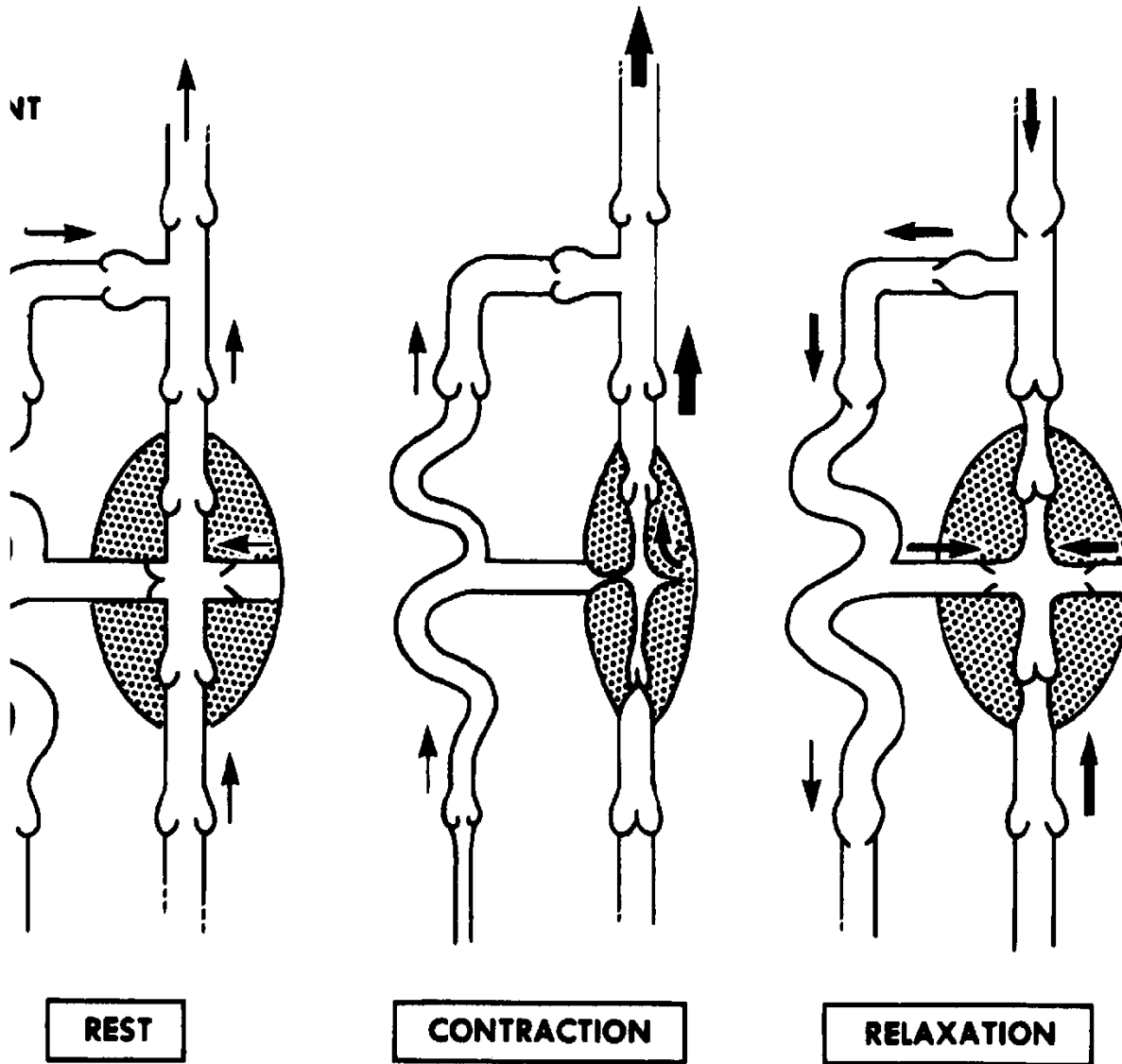
- *Leziuni asociate*
  - tegumente sclerozeaza, keratinizare
  - vene aderente de derm
  - scleroza vaselor limfatice, arteriole, nervi
  - alterarea limfaticelor agraveaza edemul

# Fiziopatologie

## VARICE

- Stagnarea sangelui in venele dilatate
- insuf valvulara —→ flux retrograd= cerc vicios
- staza in sist superficial= efort in sist profund
- munca suplimentara cu 10-20%
- vene profunde se dilata devin insuficiente
- comunicante insuficiente  tulb trofice

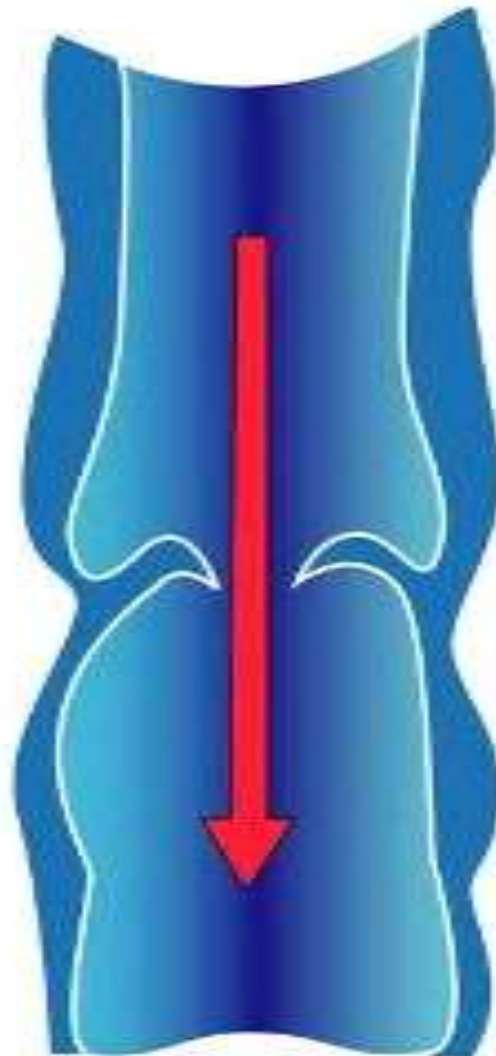
*INSUFICIENTA VENOASA CRONICA*



# Varicose Vein Valves



Blood flowing  
to heart



Reverse blood  
flow due to  
damaged valve



# Fiziopatologie

## **SINDROM POSTTROMBOTIC**

- Sist profund afectat de la inceput
- Distructii valvulare
- Recanalizari uni-plurivanalare
- Creste presiunea in sist profund explicata prin manometrie

INCOMPETENT  
DEEP AND  
SUPERFICIAL  
VALVES

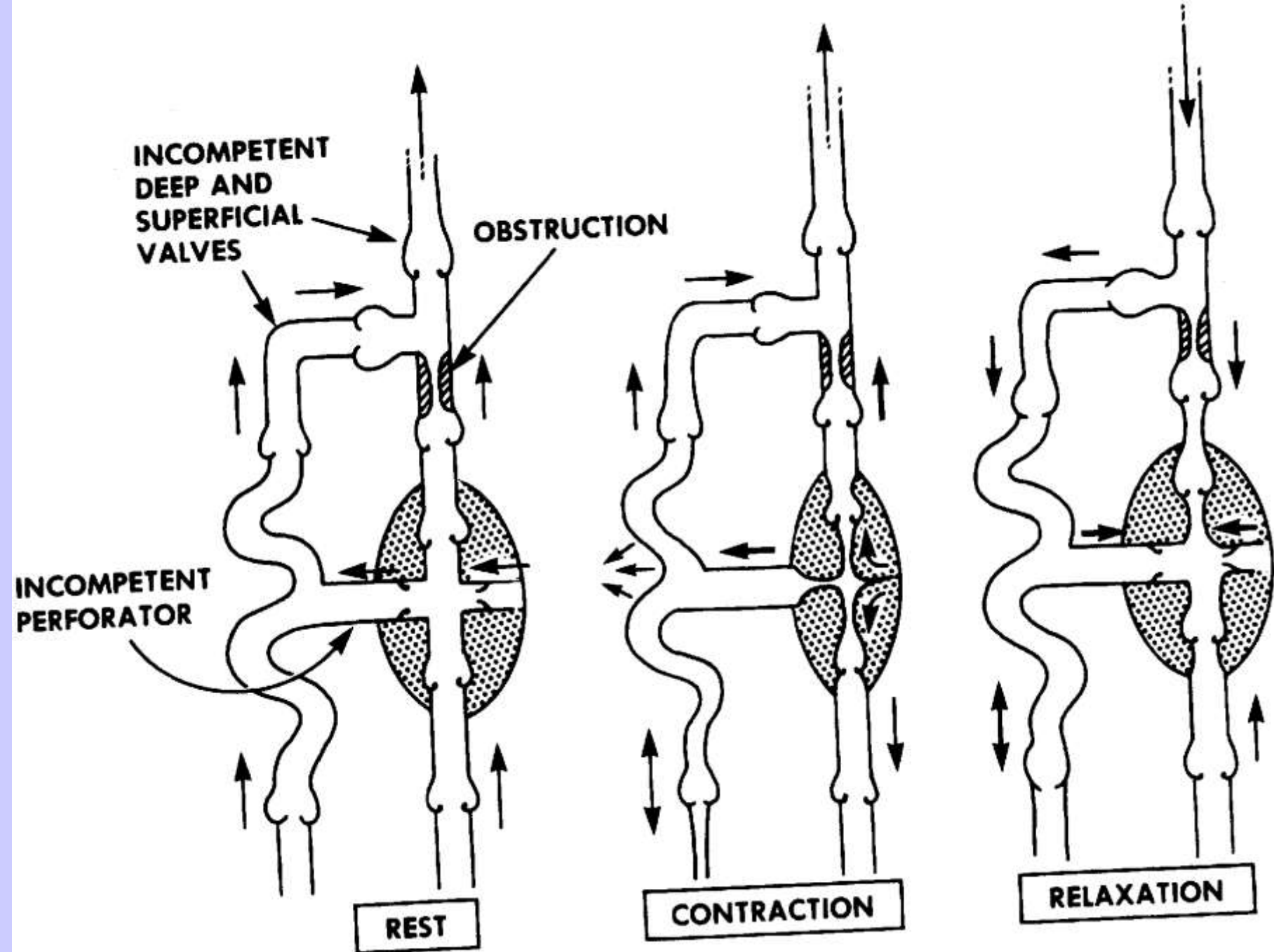
OBSTRUCTION

INCOMPETENT  
PERFORATOR

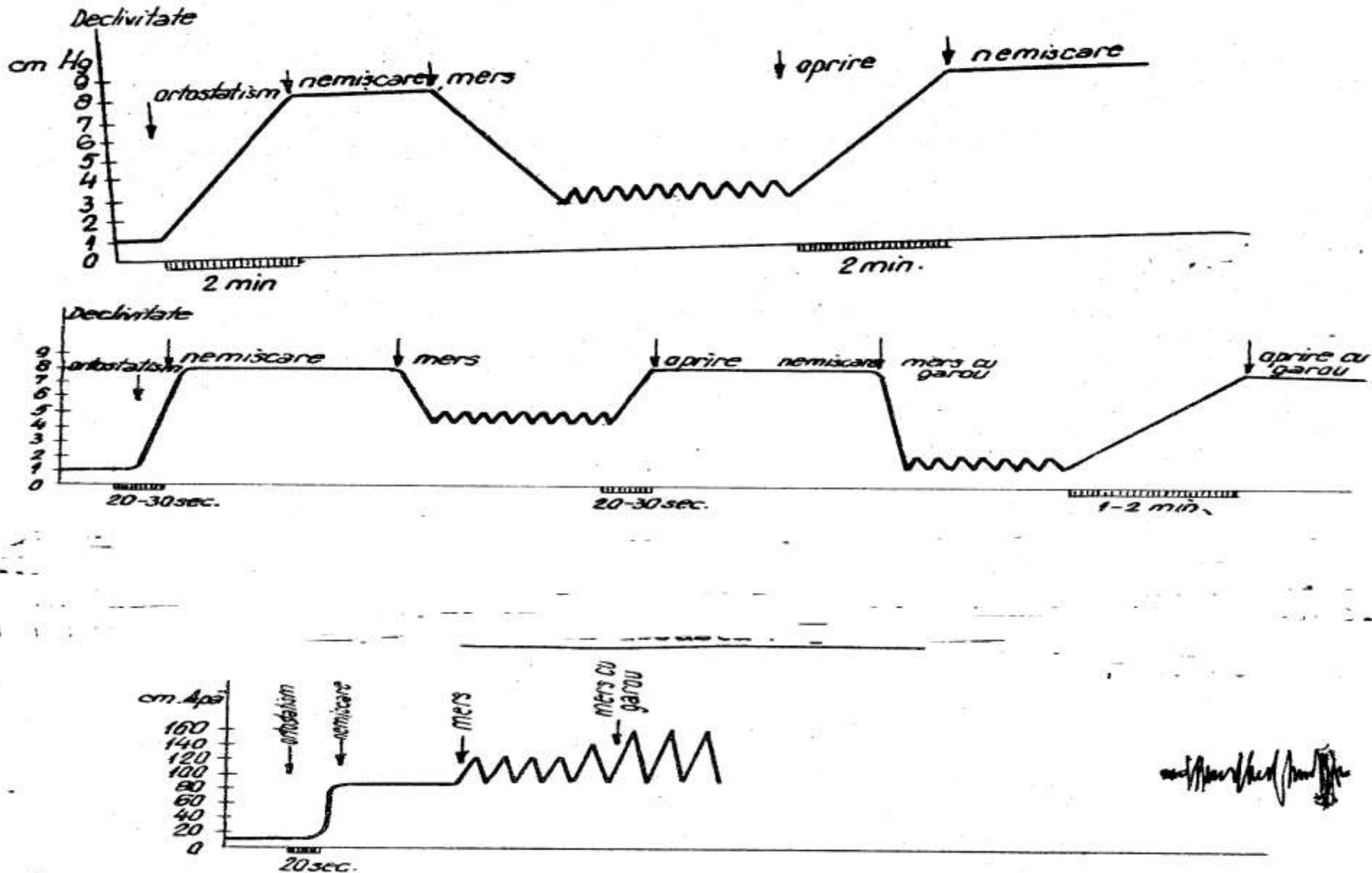
REST

CONTRACTION

RELAXATION



# Fiziopatologie Manometrie



# Tablou clinic

- Stadiul de debut
  - greutate în gamba
  - accentuare în ortostatism
- Varice constituite
  - greutate
  - varice constituite

# Tablou clinic

- Interogatoriu
  - evolutie
  - eventuala tromboflebita in antecedente
- Examenul obiectiv
  - inspectia
  - palpare semnul Schwartz

# Tablou clinic

- Metode de explorare
  - Proba Brodie Trendelenburg —→ reflux ostial
  - Proba celor 3 garouri Mahorner-Ochsner
  - Proba Perthes

# Paraclinic

- **Neinvaziv**
  - Doppler
  - Duplex
  - Fotopletismografia
  - Pletismografia
- **Invaziv**
  - Flebografia
  - Flebomanometria
  - Flebo CT





# Esential pentru diagnostic

- Vene dilatate sinuoase
- Simptomatologie saraca
- Semne specifice insuf cronice

# Diagnostic diferencial

- Varice primare - secundare
- Insuficienta venoasa cronica - sindrom posttrombotic
- Alte afectiuni

# Evolutie Complicatii

- Insuficienta venoasa cronica
- Tromboflebita varicoasa
- Rupturile varicelor

# HIPODERMATITA





# DERMATITA HIPERCROMA



# ULCER



# Tratament

- **Profilactic**

- gimnastica la locul de munca
- compresiune externa

- **Curativ**      Scleroterapie

- agenti sclerozanti+compresiune externa

- **Chirurgical** Safenectomie prin stripping  
(Babcock)

---

Alglave)

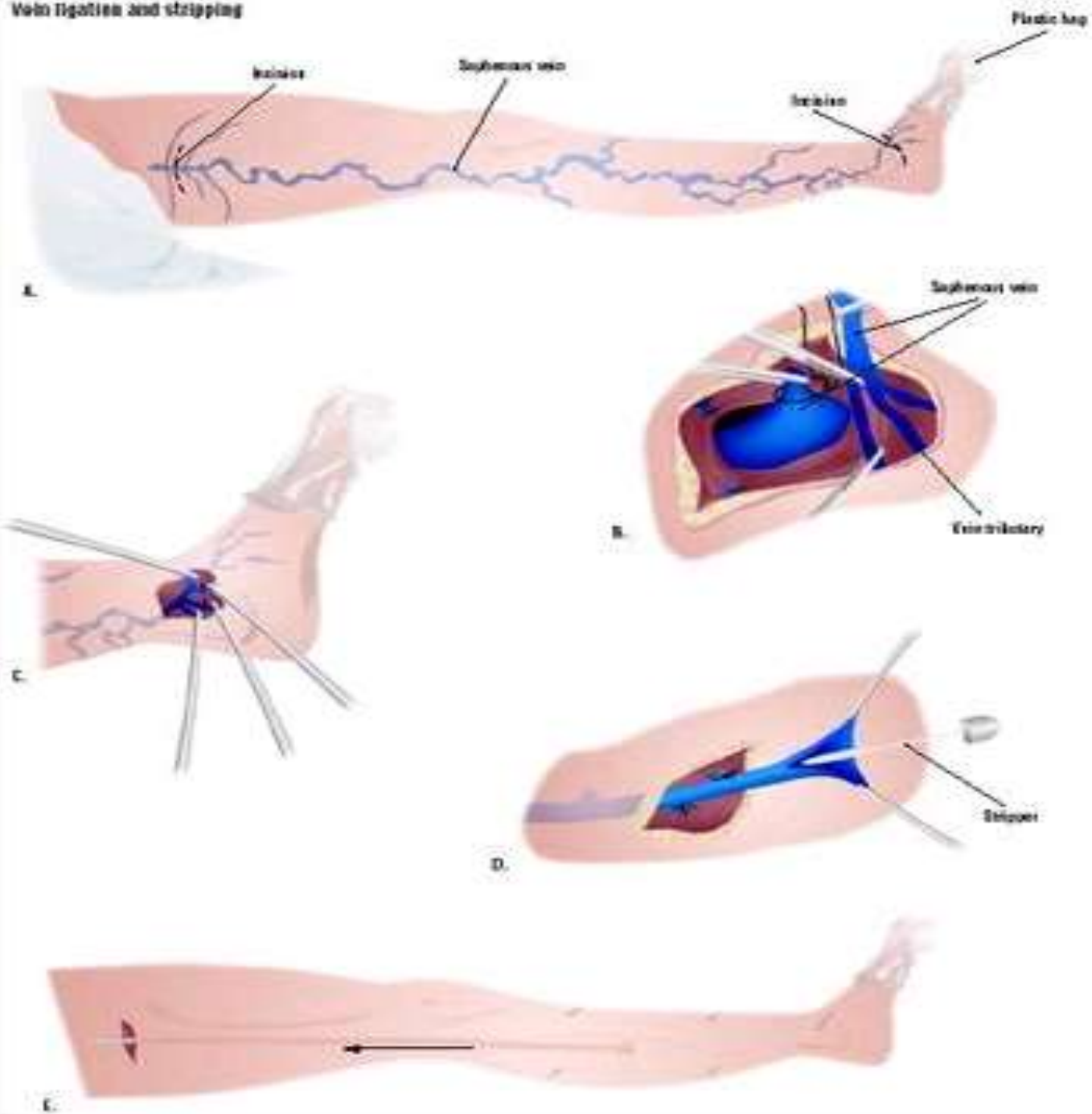
Safenectomie totala(Terrier-

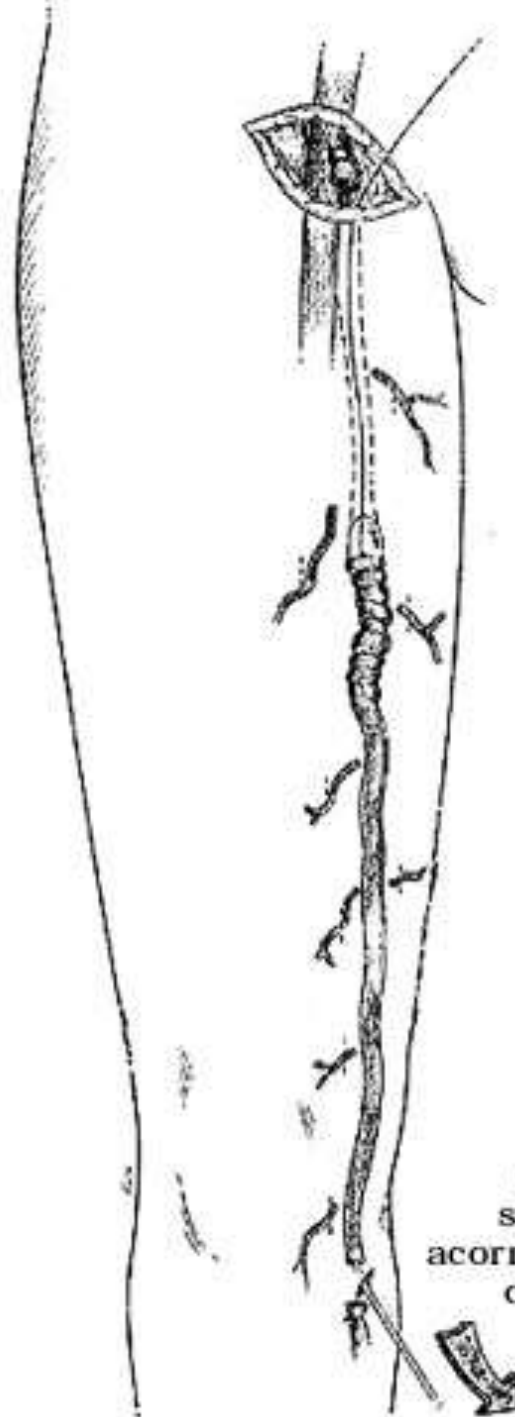
Operatia Linton

Modern valvuloplastii, mansoniari,  
endochirurgia, terapie laser

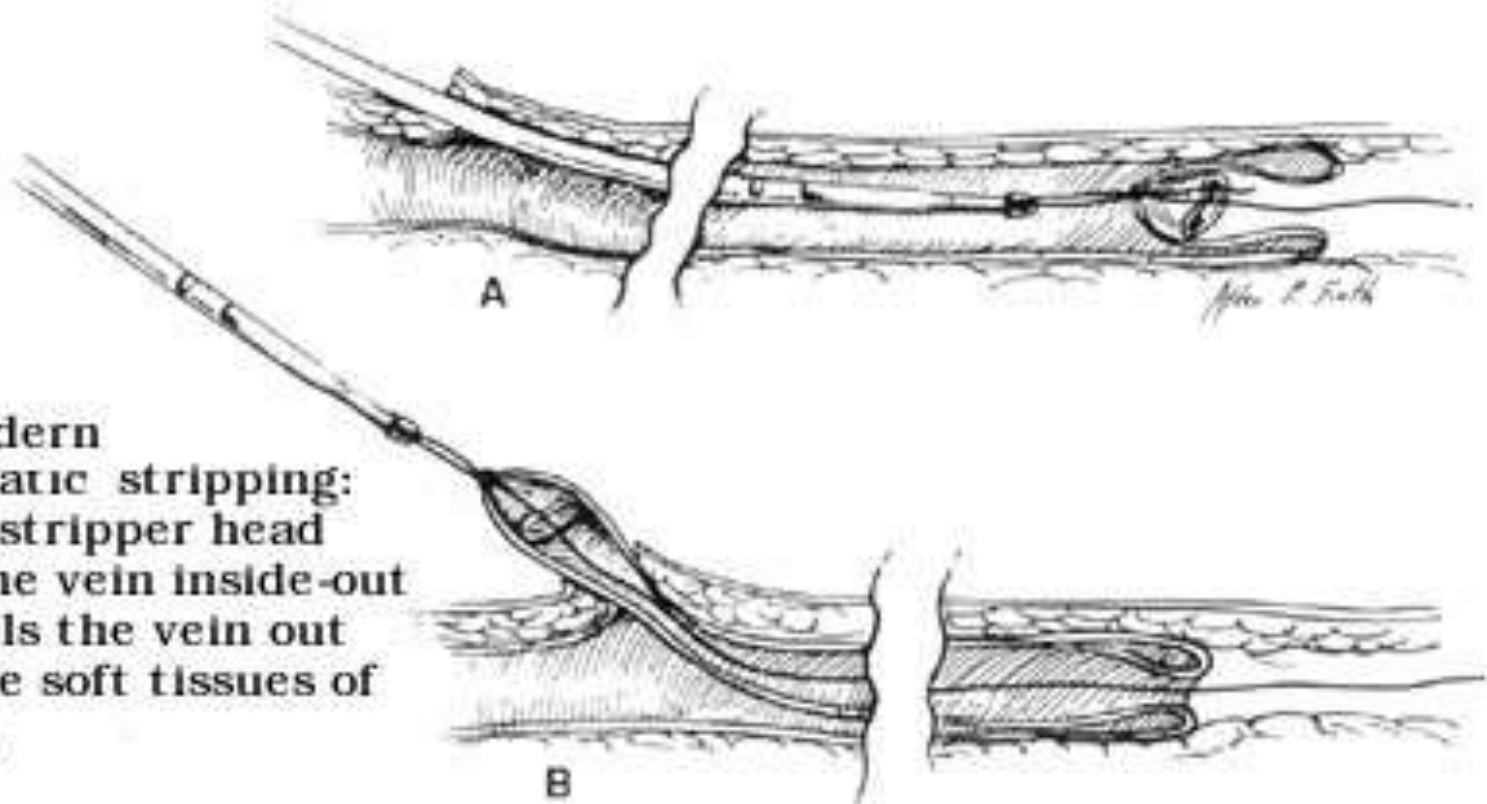


# Vein ligation and stripping

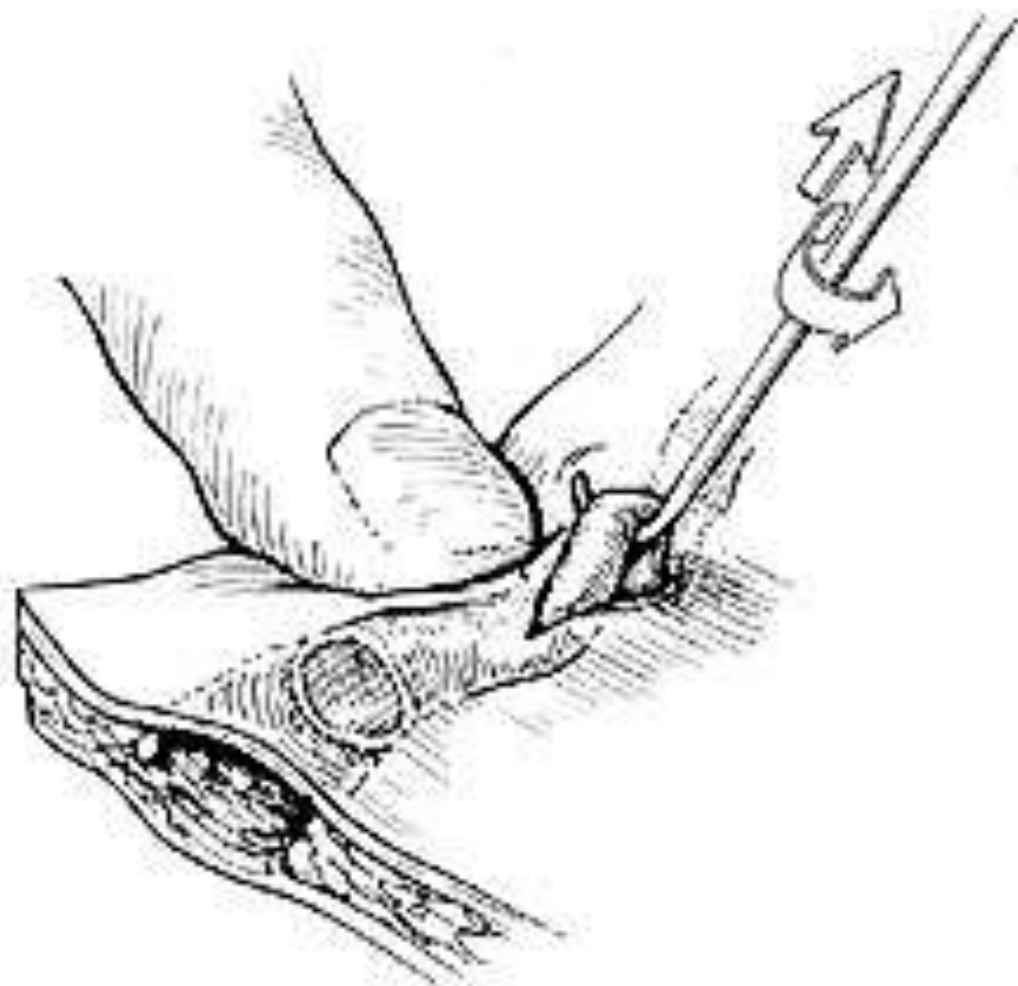




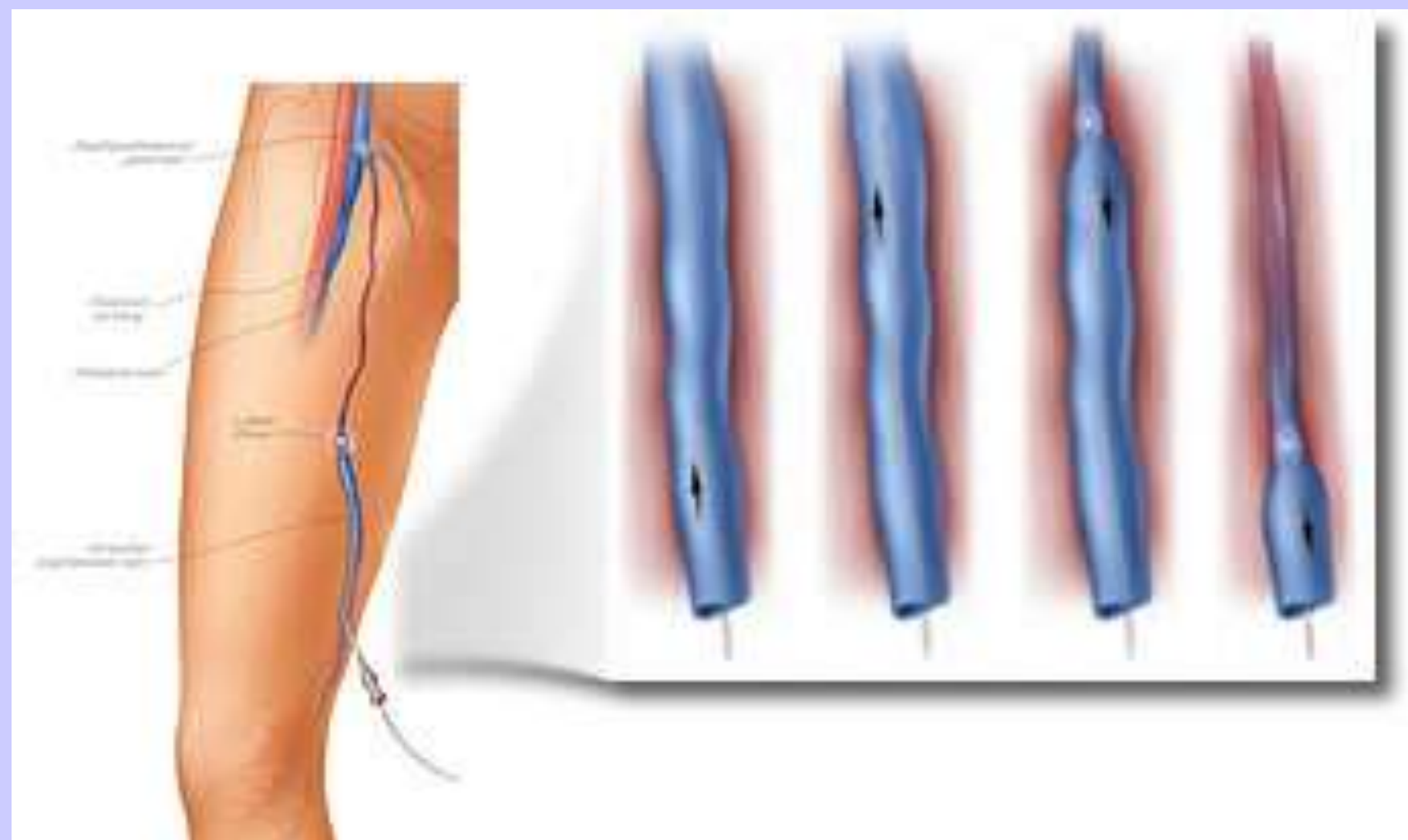
Conventional stripping. Big acorn shaped head causes trauma to the soft tissues.



The modern atraumatic stripping: a small stripper head turns the vein inside-out and peels the vein out from the soft tissues of the leg.



**The hook will easily remove the varicosities**





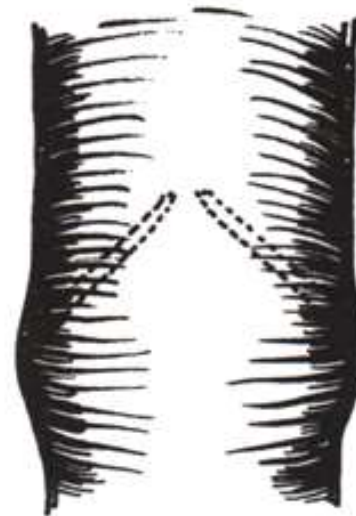












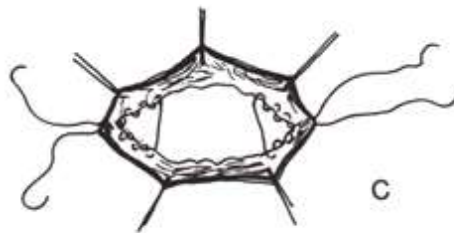
A



A

B

C



C



D



B



# BOALA TROMBOEMBOLICA

# Cauze

- Triada lui VIRCHOW
  - leziunea parietala
  - staza venoasa
  - hipercoagulabilitatea
- Factori favorizanti
  - exogeni
  - endogeni

- Varsta peste 40 ani
- Sex masculin
- Obezitate
- Neoplazii
- Istoric DVT sau de embolie
- Proceduri chirurgicale

Orthopedie, Neurochirurgie, Urologie; peste 2 ore

- Gravditate
- Contraceptive orale
- Sindrom nefrotic
- Lupus
- Disfibrinogenemia
- Deficiente cu potential genetic

Proteina C

Proteina S

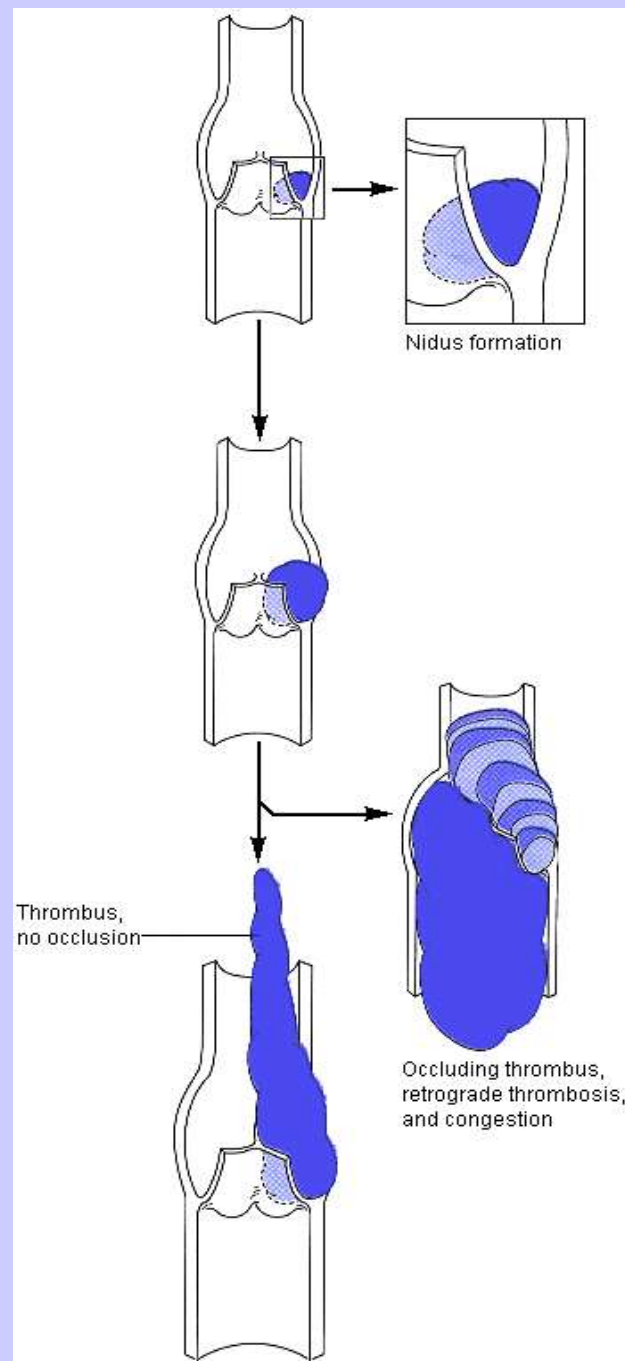
Antitrombin III

Plasminogen

- Abuz de droguri

# Anatomie patologica

- Tromb alb
- Tromb rosu
- Tromb mixt
- Flebotromboza —→ embolie pulmonara
- Tromboflebita propriu zisa



# Tablou clinic

- Perioada de debut
- / Perioada de stare

semne generale

semne functionale

semne de laborator

semne locale



# Tablou clinic

**semne generale** cr temperatura(semn Mikaelis)

accelerare de puls(puls catarator Mahler)

**semne functionale** durere spontana in molet neliniste, agitatie, impotentia fct.

# Tablou clinic

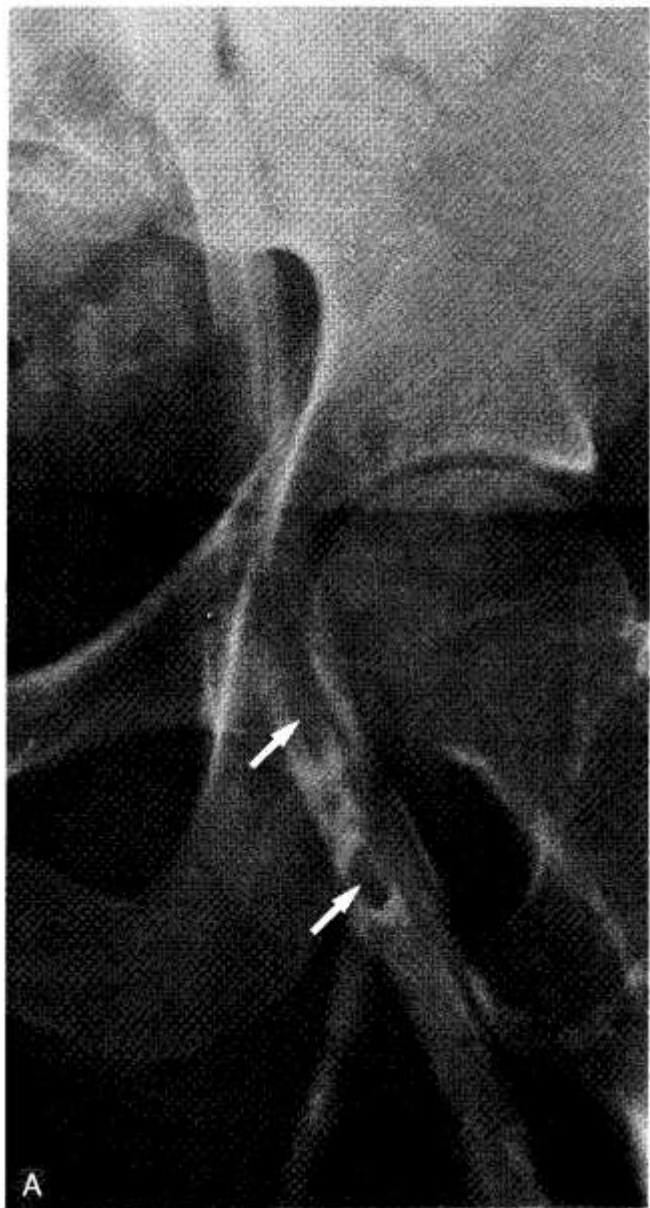
## **semne locale**

- vena pretibiala dilatata semn Pratt
- semn Payr
- semn Tschmarke(compresia gambei)
- semn Homans( dorsoflexia piciorului)
- creste temperatura local
- edem dur fara godeu
- creste diametrul gambei

# Paraclinic

- Neinvaziv
  - doppler, duplex
  - pletismografia
- Invaziv
  - flebografia





A



B



# Forme clinice

- **Localizare**

- superficial
- profund      gambiera  
                    popliteo-femurala(phlegmatia alba  
                    dolens)  
                    ileo-femural(phlegmatia coreulea dolens)

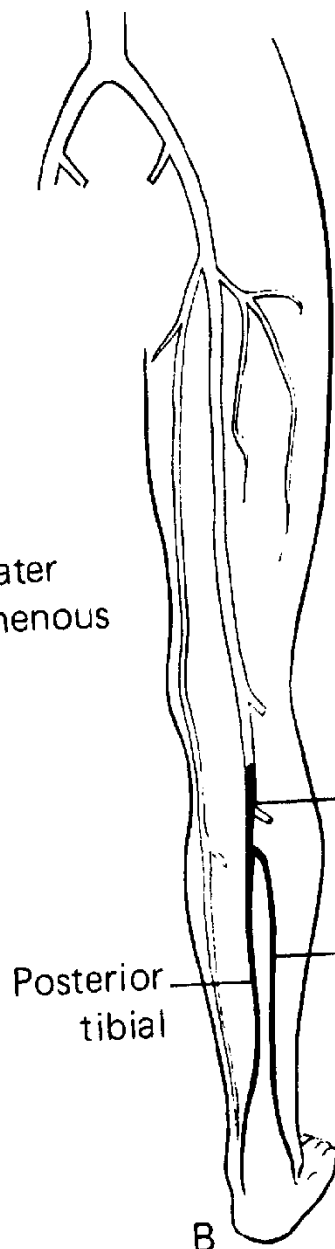
- **Particulare**

- intraabdominale
- migratorie
- mbr superior(Paget-Schroetter)



Greater saphenous

A

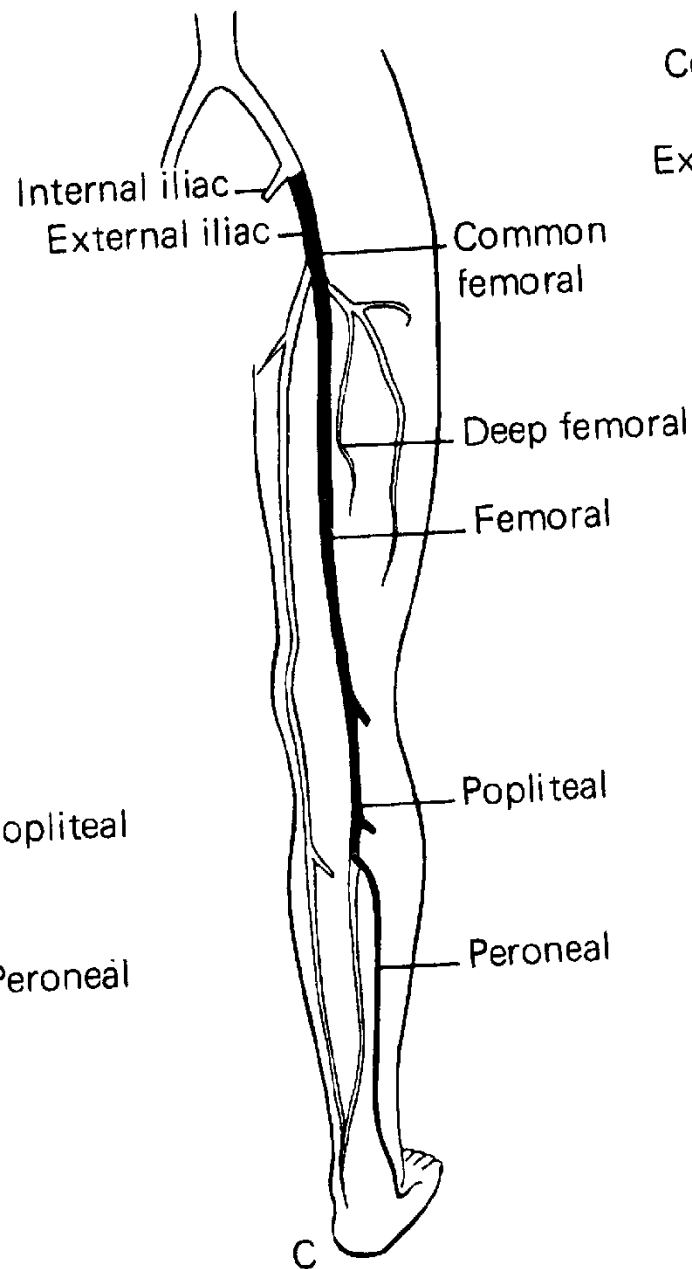


Posterior tibial

Popliteal

Peroneal

B



Internal iliac  
External iliac

Common femoral

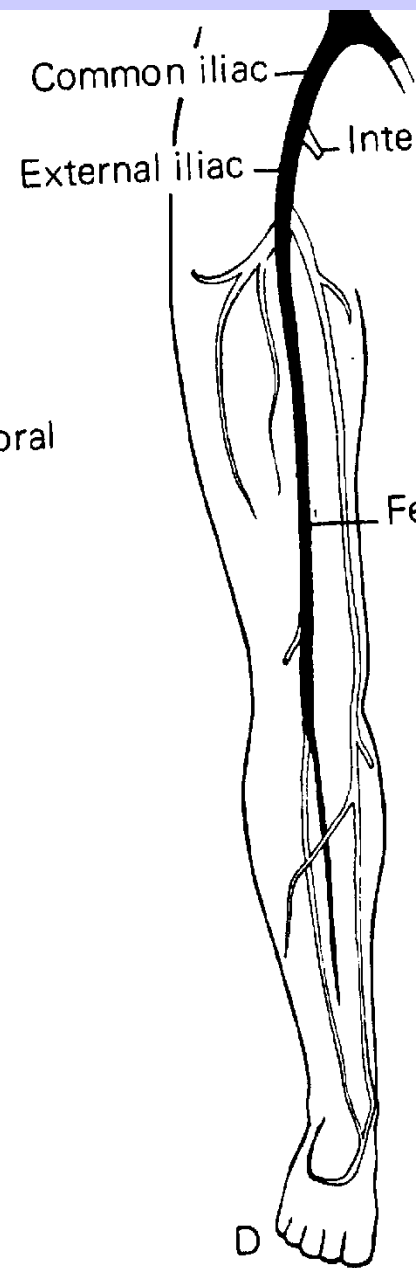
Deep femoral

Femoral

Popliteal

Peroneal

C




Common iliac  
External iliac

Internal iliac

Femoral

D

# Evolutie, Complicatii

- Stadiala
- Embolia pulmonara
- Gangrena venoasa
- Sindrom posttrombotic
  - org fibroconjunctiva
  - repermeabilizare uni-pluricanalara
  - **distructie valvulara**  **hiperpresiune**



# Tratament

- **Profilactic**

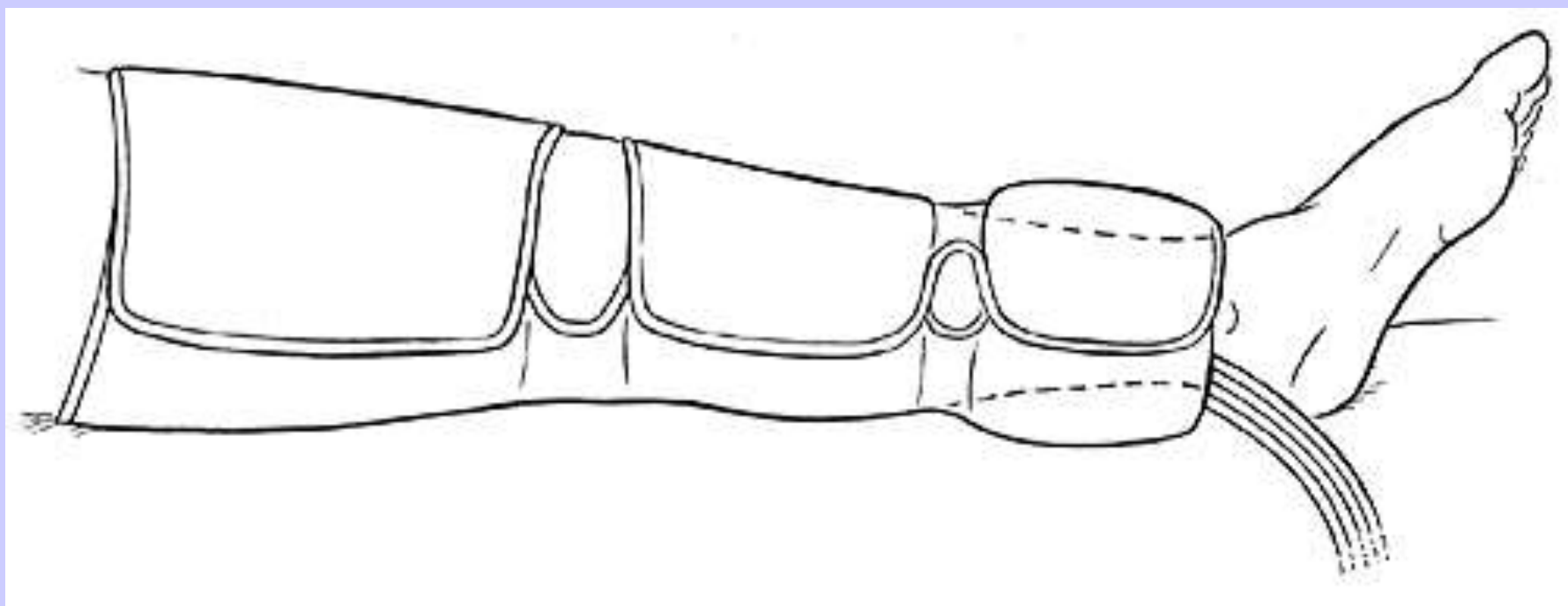
FFI bolnavi cu risc

compresiune externa

doze mici de heparina(Kakkar) 5000U/8h s.c.

enoxaparina, calciparina, clivarin

mobilizari precoce



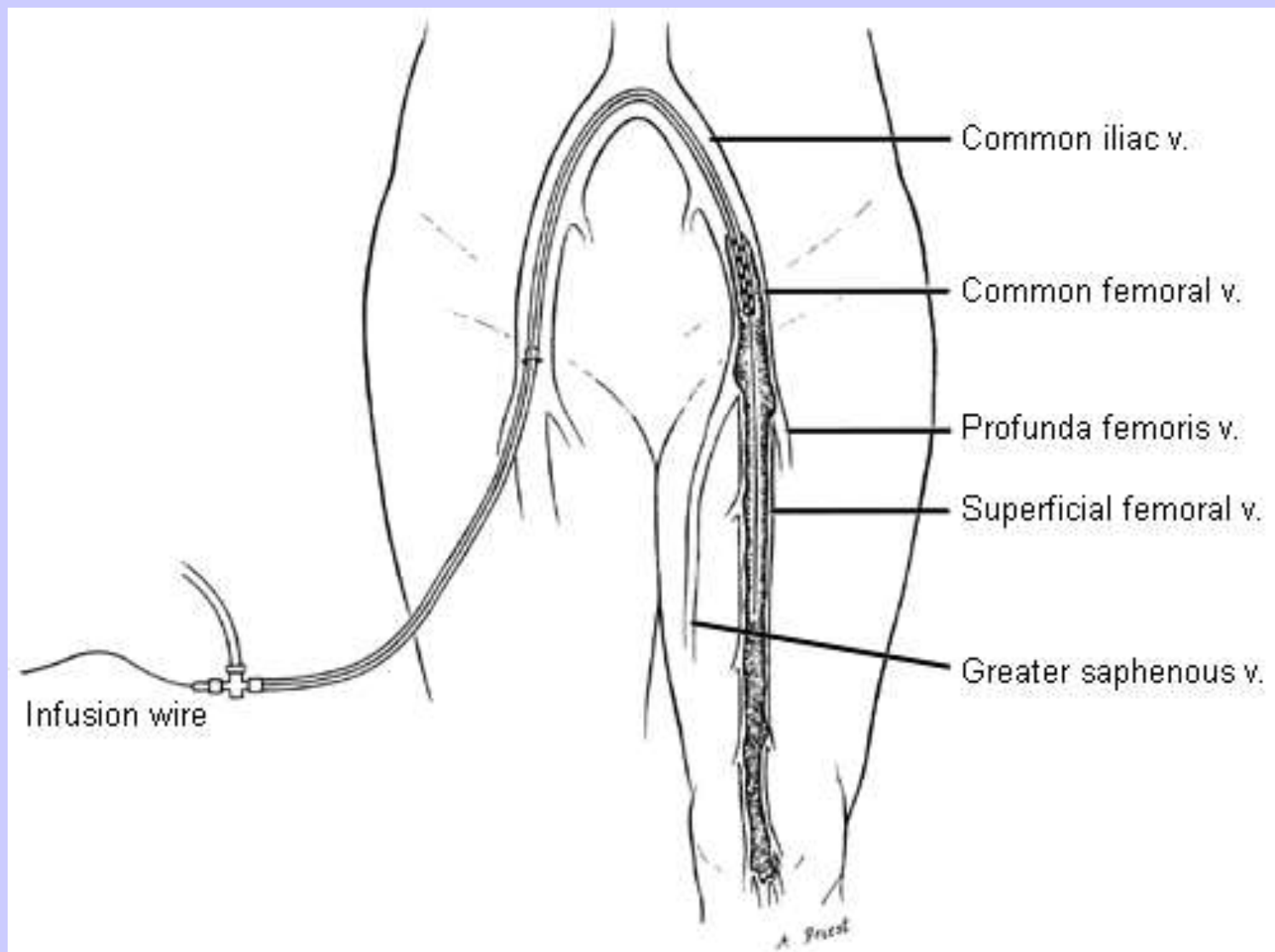
# Tratament

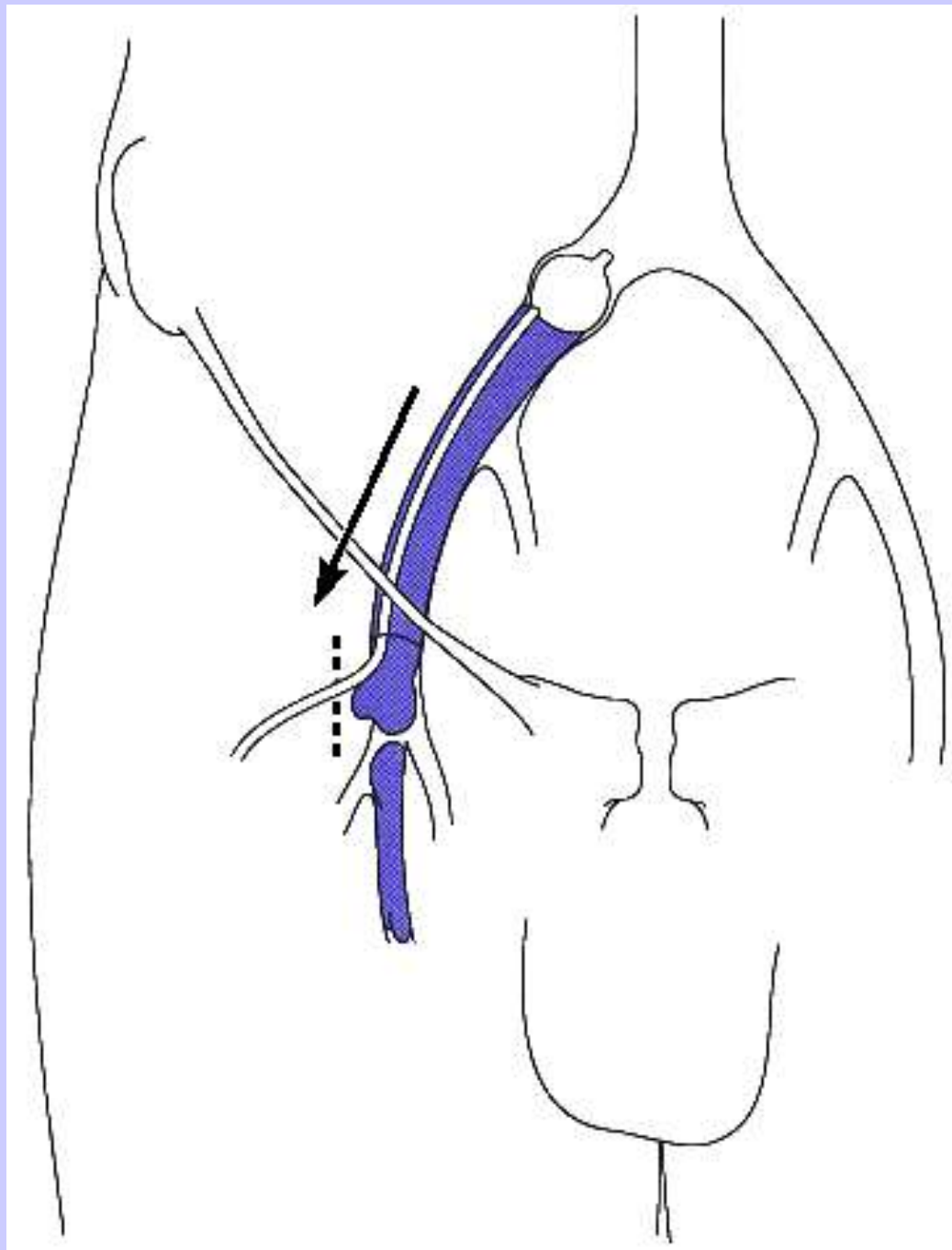
- **Curativ**

- anticoagulant continuu 1000U/h  
discontinuu 10000U bolus  
5000U la 4 ore
- fibrinolytic general strepto-urochinaza  
local

- **Chirurgical**

- trombectomie cu sonda Fogarty





# Embolia pulmonara

- Mici
- Mijlocii
- Mari
- Fiziopatologic
  - teorie mecanica
  - teorie reflexa

- Crește rezistența în arterele pulmonare
- crește presiunea arterială pulmonară
- crește lucrul inimii drepte

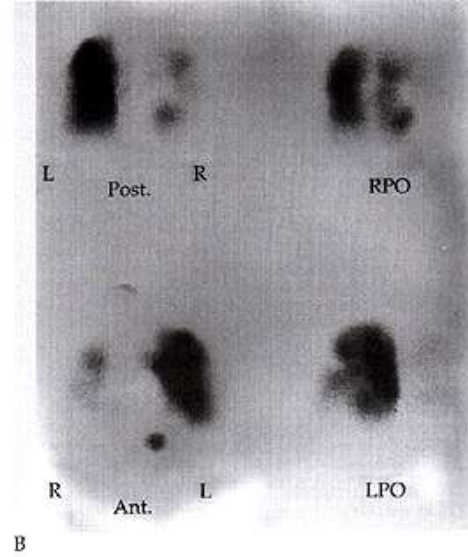
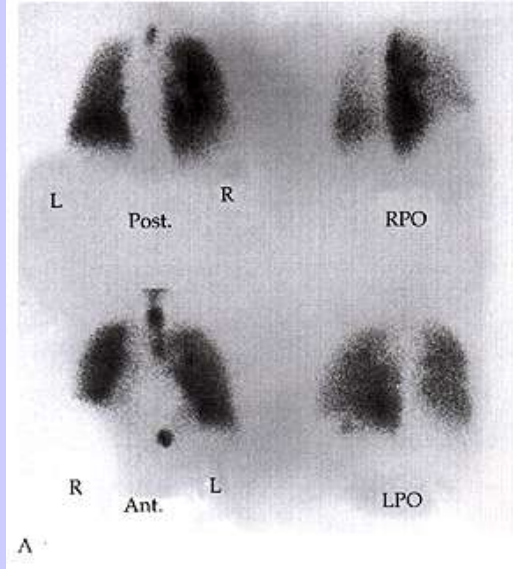
# Tablou clinic

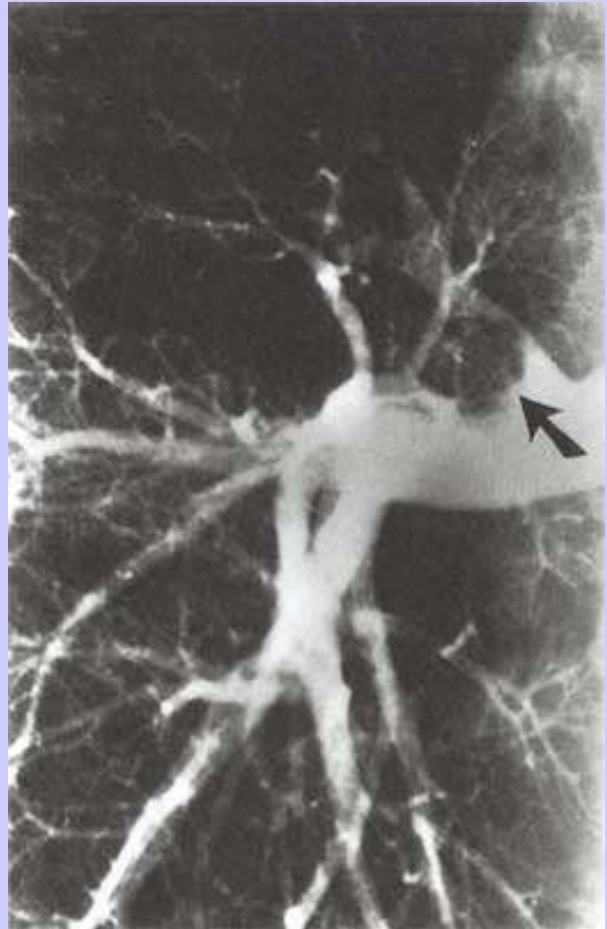
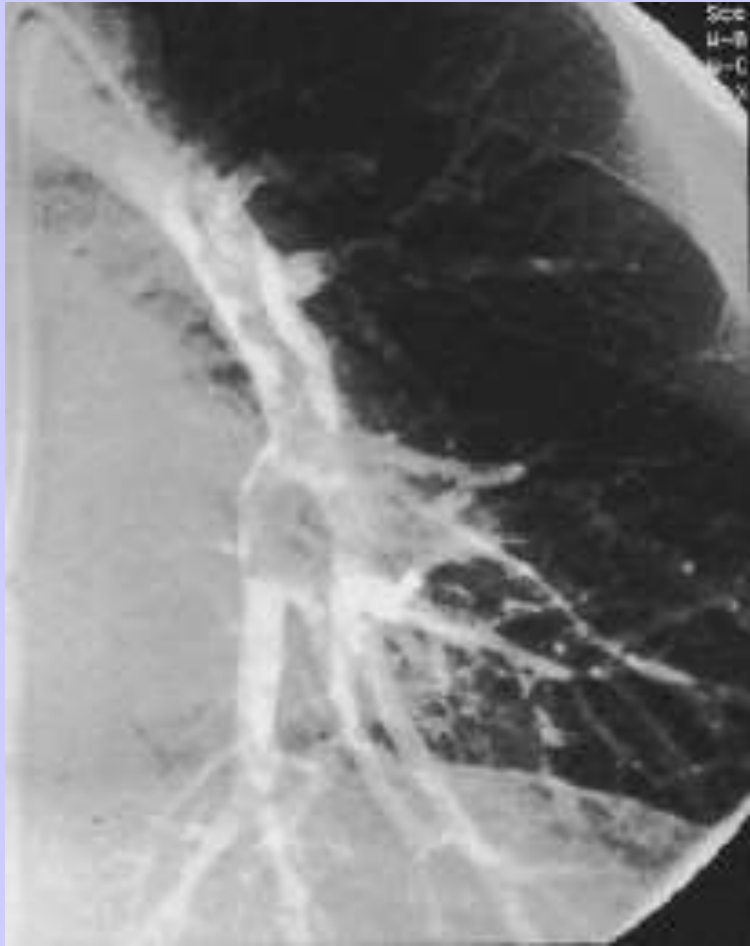
- Durere toracica
- Dispnee
- Hemoptizie
- Tahicardie, tahipnee
- Cianoza
- Freccatura pleurala



# Paraclinic

- Rx normal
- Scintigrafie
- Arteriografie
- EKG inversare de unda T  
aplatizare de segment ST





# Tratament

- Faza acuta

- profilaxia

- medicamentos anticoagulant heparina  
fibrinolytic

general urokinaza 4400U iv bolus

4400U/kg/h 12ore

streptokinaza 250000U iv 30 min

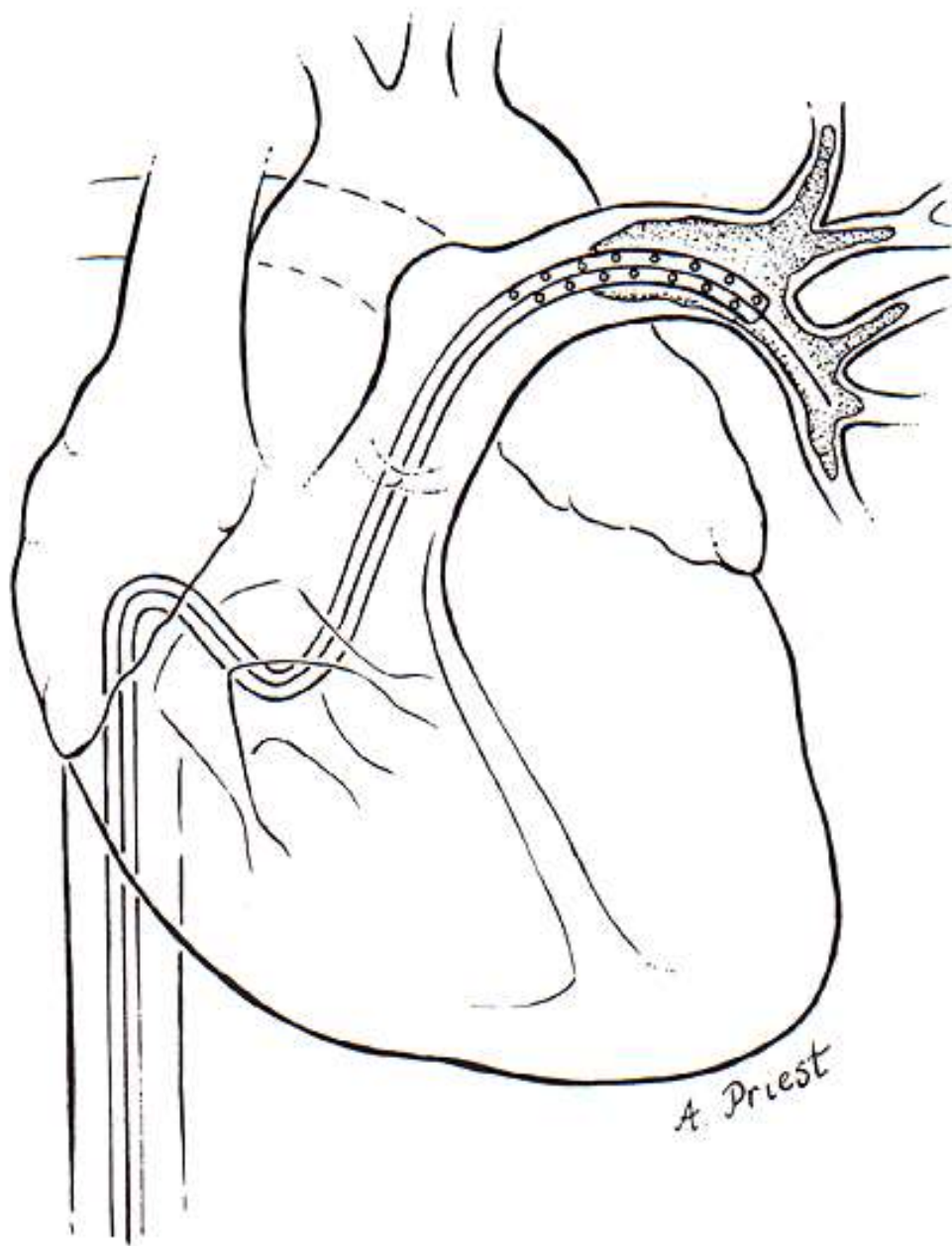
100000U/h 24ore

r-tPA 90- 100mg iv 6-7 ore

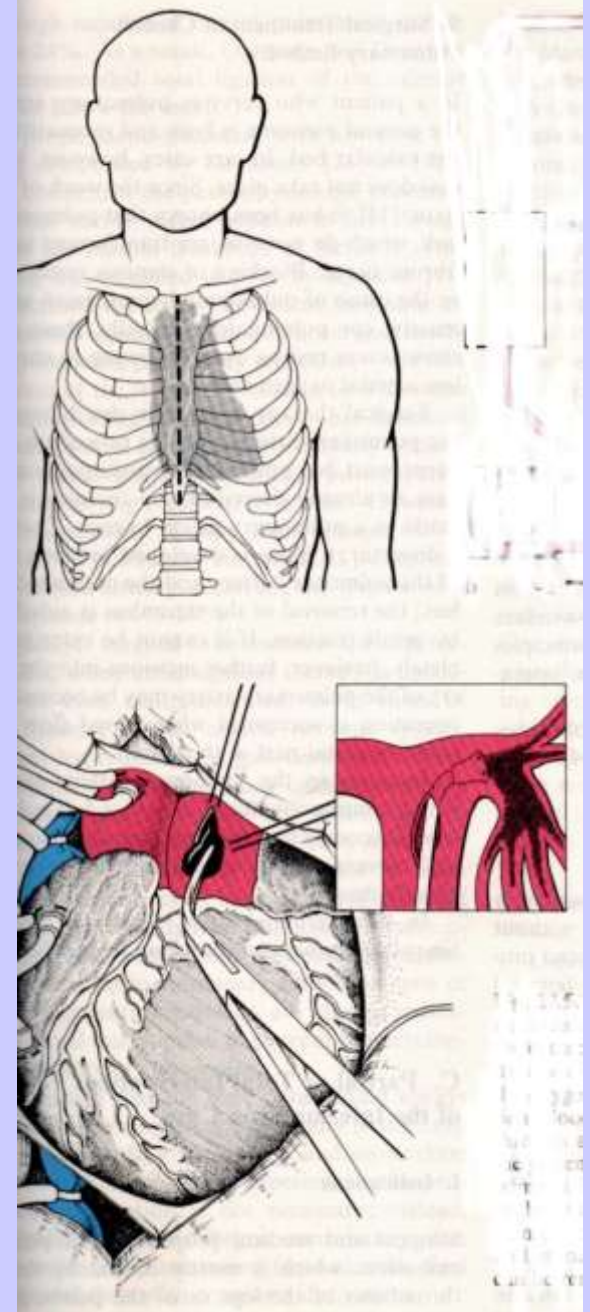
local

- chirurgical trombectomie directa

indirecta



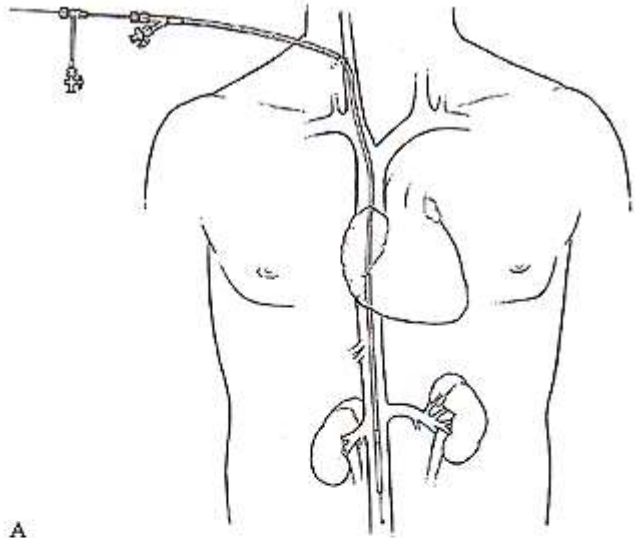
## Pulmonary Embolism



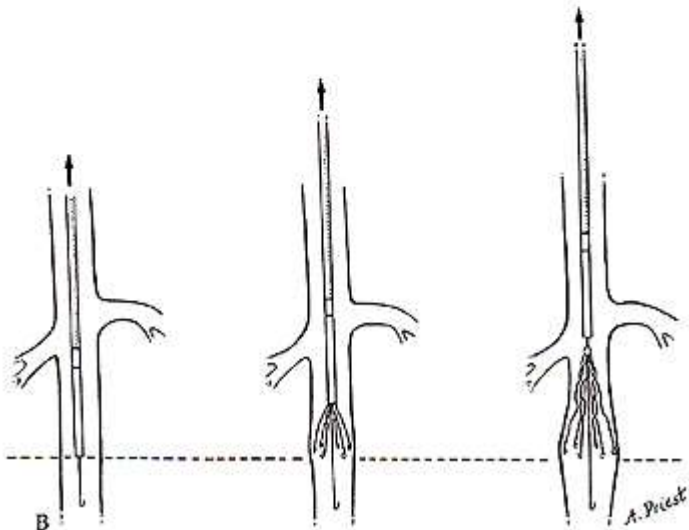


# Tratament

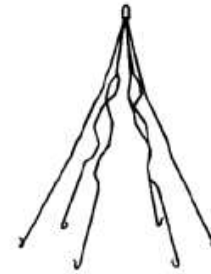
## Recidivante



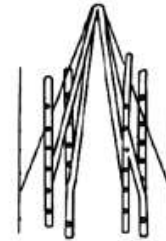
A



B



Greenfield



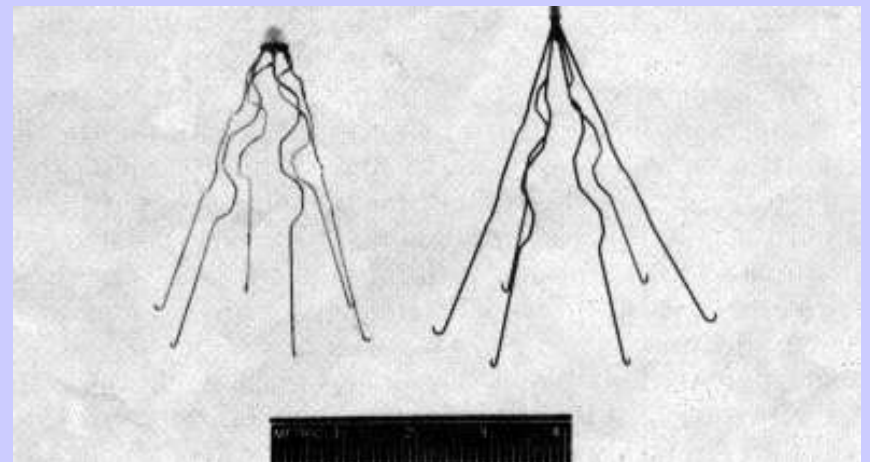
Venatech



Simon Nitinol



Bird's Nest



# Pulmonary Embolism - Greenfield Filter Placement

## Path of Emboli from the Lower Extremities to the Lungs

## Greenfield Filter, Heart and Lungs

