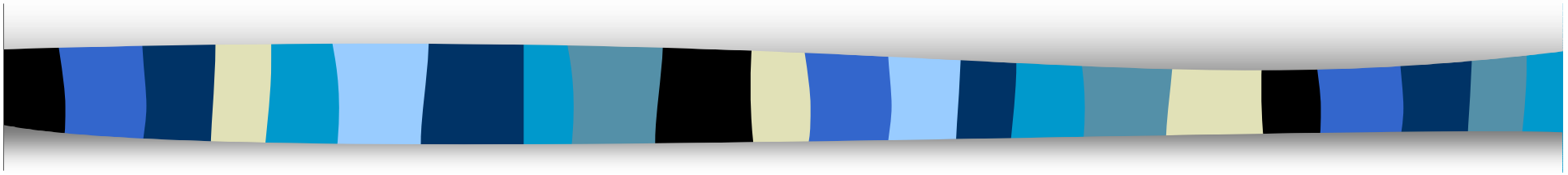
Disclosure of Interests

Jean-Jérôme (JJ) GUEX, MD, FACPh, is

- Investigator receiving honoraria from
  - Kreussler Pharma (Germany)
  - Pierre Fabre SA (France)
  - Sigvaris + cie (France)
- Member of the SAB, and shareholder
  - Vascular Insights

How to avoid bad results and complications of sclerotherapy of reticular veins and telangiectasias



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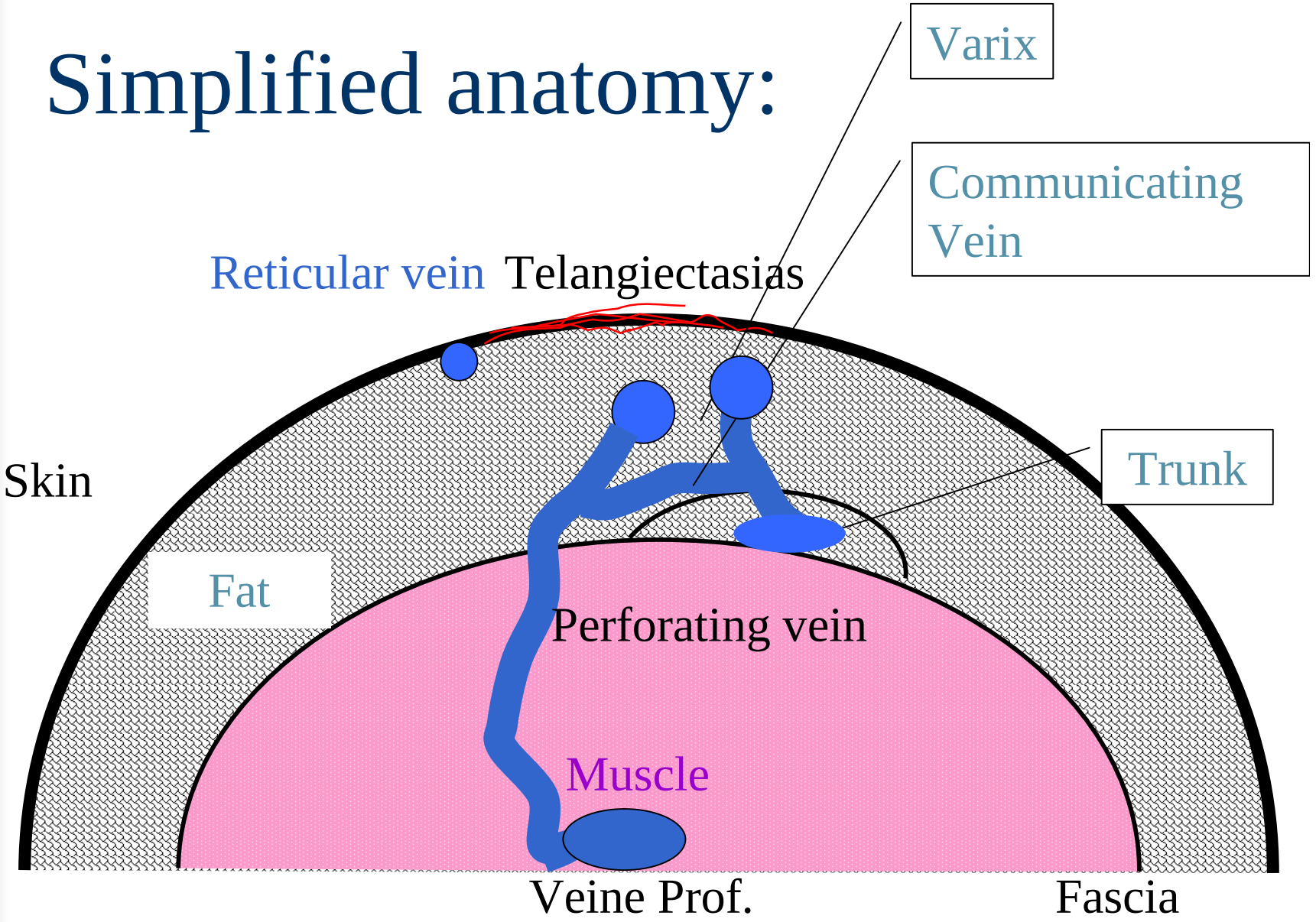
Feb 2010

Simplified anatomy:



Objective bad result: 2 types.

On the initial lesion

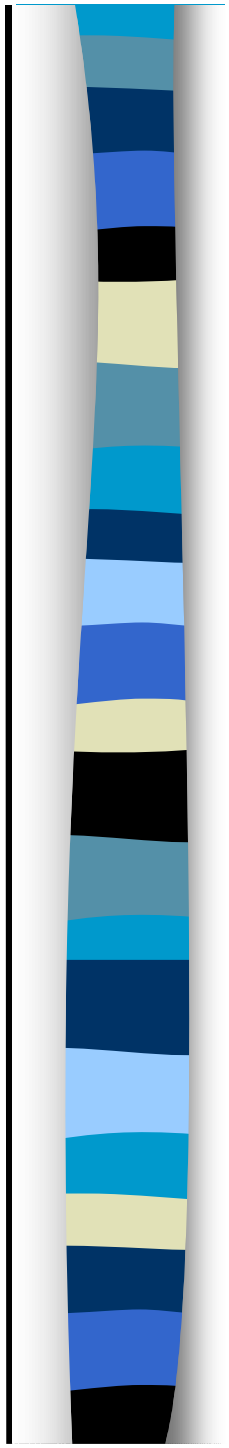
- Insufficient ?
- Inefficient?
- Worsening ?

Appearance of a new lesion

- Matting ?
- résidual Pigmentation? (hémosiderin, mélanin)
- Nécrosis ? (extraV, intraA injections)
- Scar ? (of necrosis)

Subjective bad result.

- Patient not satisfied despite an undisputable improvement.
- It is a communication problem.
- Most slightly affected patients are often the most difficult to treat and the less satisfied
  - Avoid them, or if you’re confident: explain in depth, and take pictures



Bad results are avoidable:

- 4/5 times ther is a neglected varicose network (strategy).
- 1/5 times a bad technique (tactics).
- It can also be an association of both !
- Untreatable veins are exceptionnal !

Strategy (1):

- First: decrease the superficial venous hyper pressure by :
  - Suppression of leaking points (incompetent junctions, pathogenic perforators)
  - Suppression of long trunkular refluxes (intra-fascial).
  - Suppression of varicose reservoirs.
  - Suppression of reticular veins before treatment of telangiectasias

A complete venous check-up is necessary before any treatment:

- Patient's complaint and expectations.
- Results of previous treatments if any.
- Clinical exam:
  - Visual and palpation
- Full Duplex exam (bilat., deep, superf.)
- Marking, Mapping

Strategy (2):

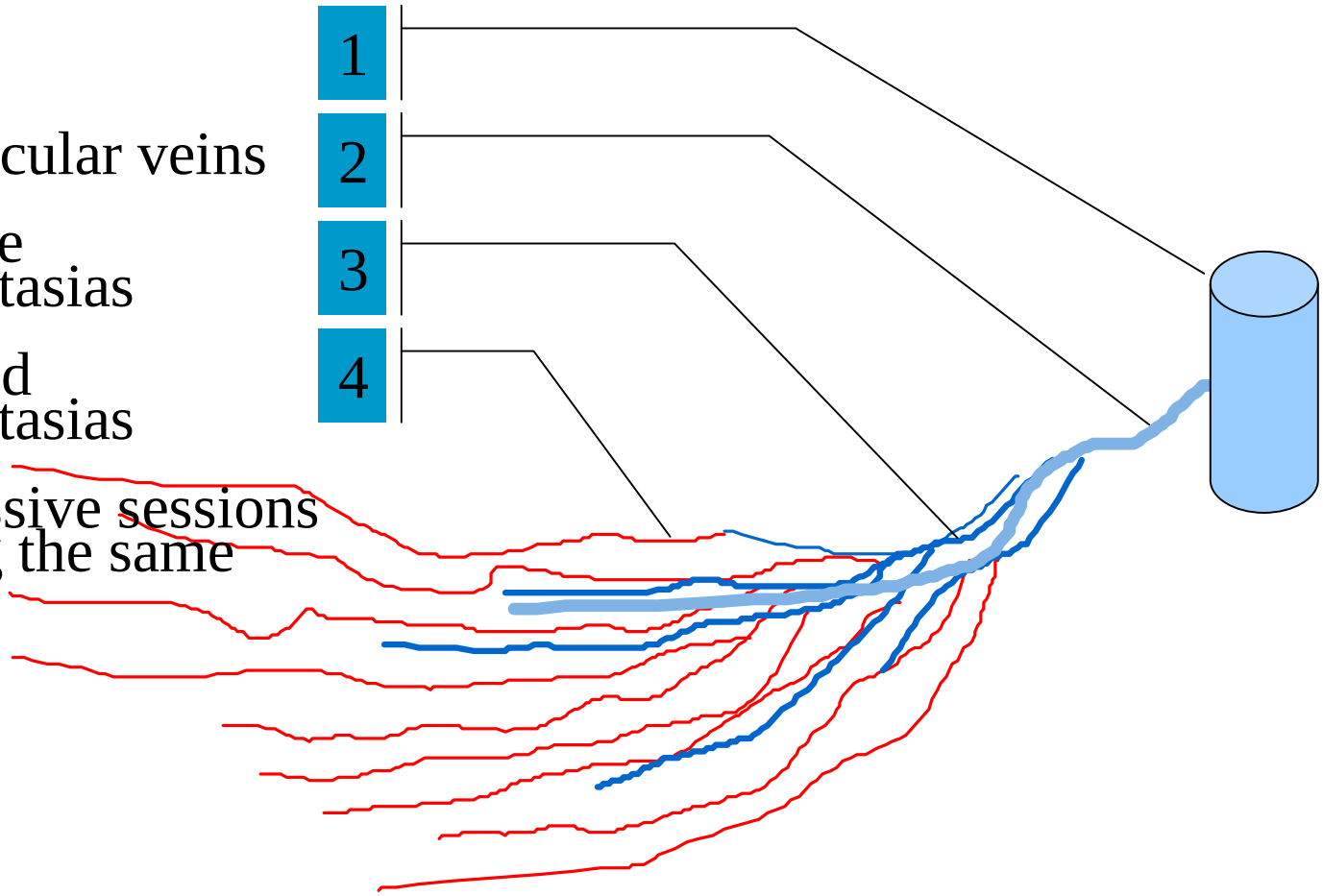
Varices

Then reticular veins

Then blue telangiectasias

At last red telangiectasias

In successive sessions or during the same session.



How many sessions Doctor ??

Example of planning

- 2 sessions echo-guided foam sclero of varices
- 2 sessions (foam) sclero of small residual varices
- 1 session sclero reticular veins
- 2 sessions (micro) sclero télangiectasias

Sometimes the treatment is longer than 10 sessions, it is necessary to anticipate and to advise the patient.

Do spider veins go away at each session ?

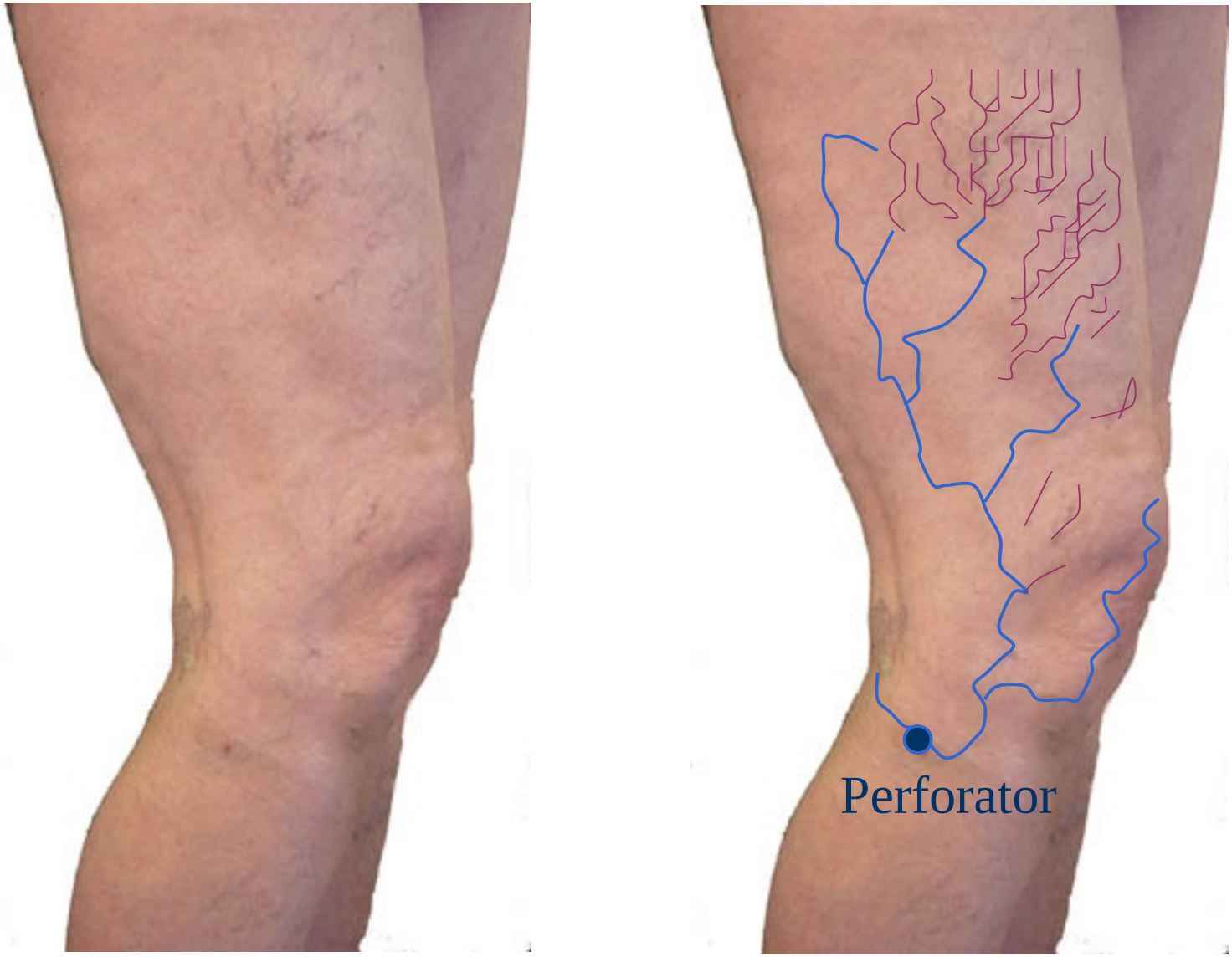
- Not necessarily !

“Like paint, several thin layers are better than a thick one”

Find reticular veins:

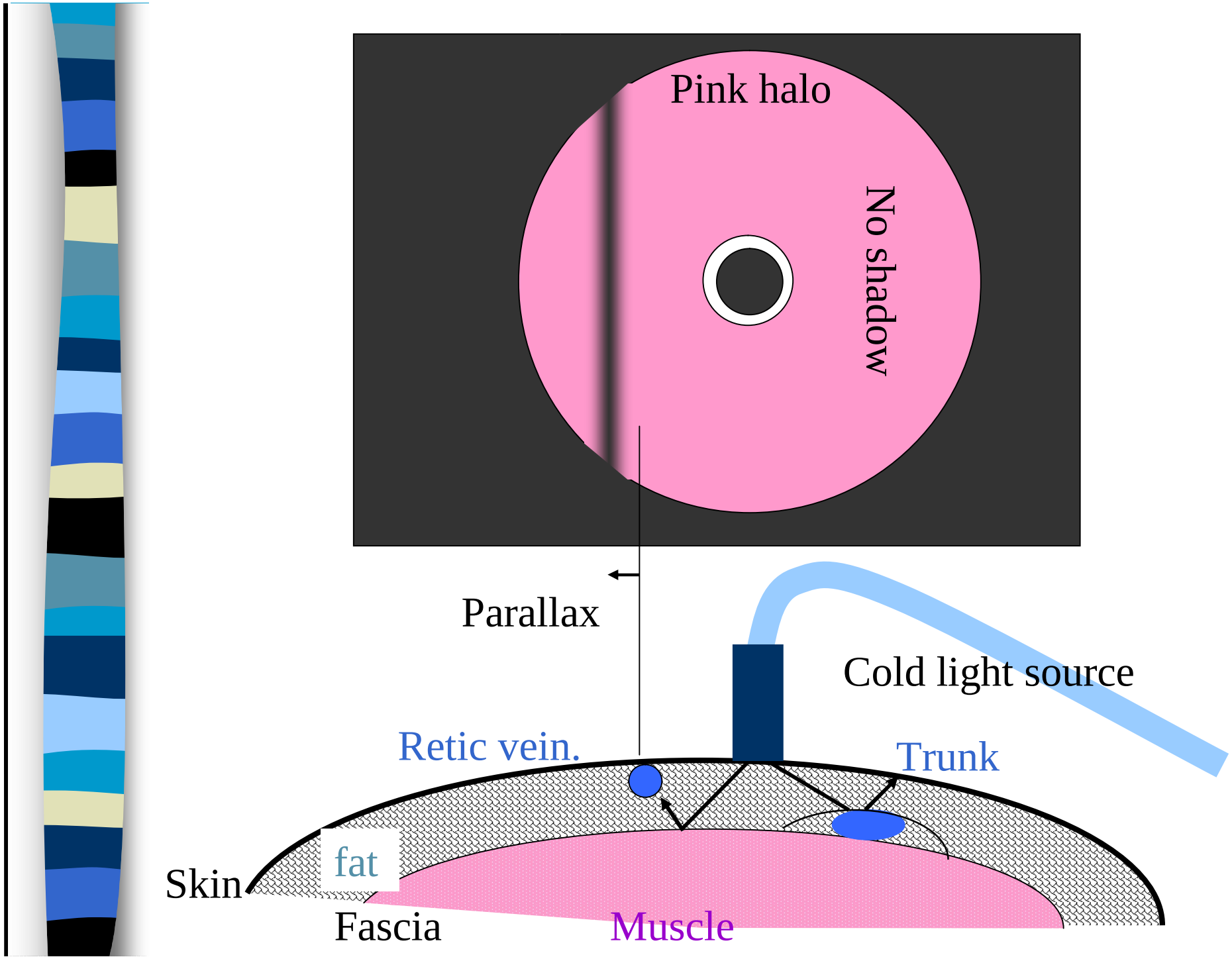
- They are always present, it is necessary to actively look for them and to find them, especially Albanese's lateral network

Albanese’s lateral network

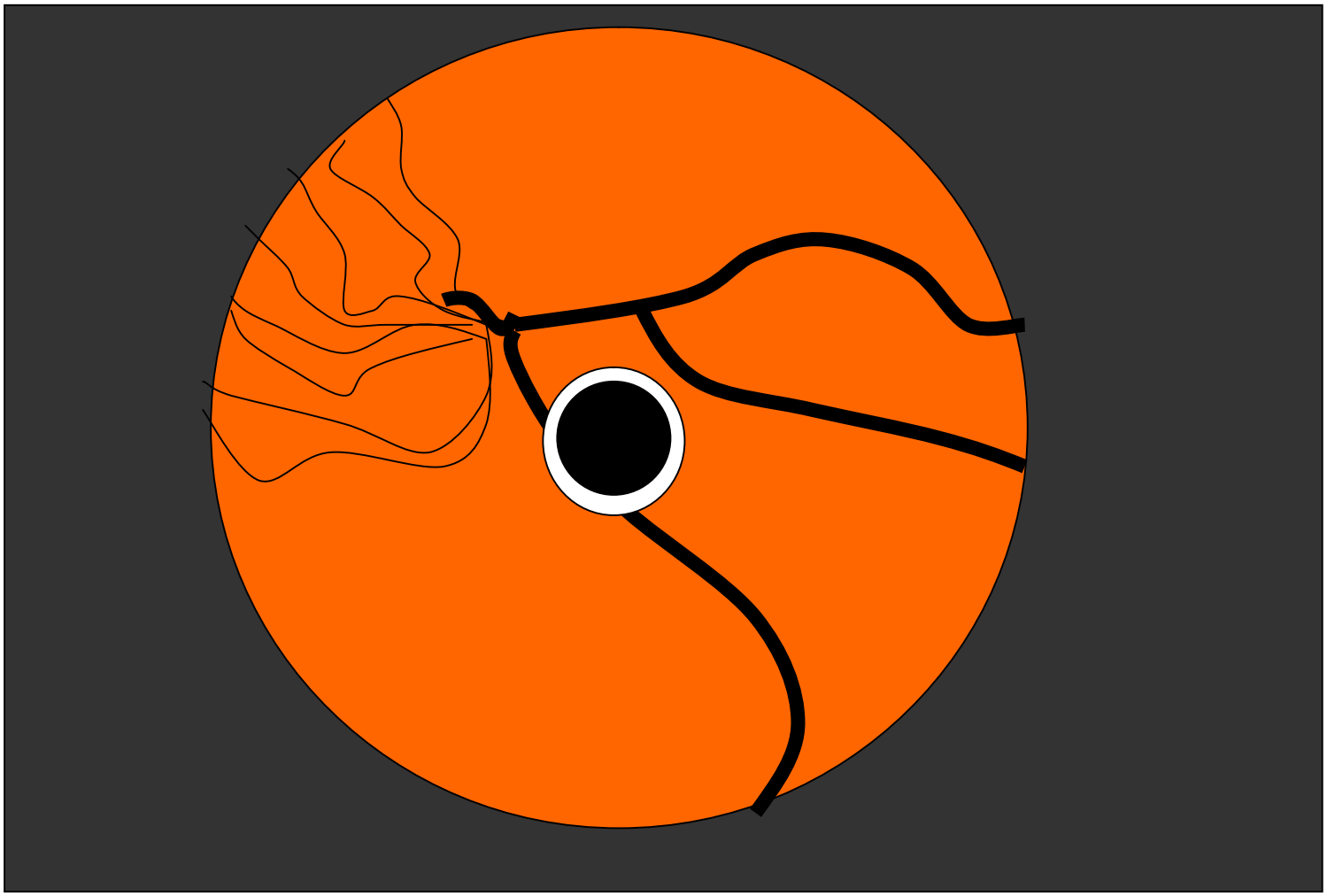


To find reticular veins:

- Transillumination can help because it projects the shadow of reticular veins on the skin after reflection of light on the fascia.


Pink halo
No shadow
Parallax
Cold light source
Retic vein.
Trunk
fat
Skin
Fascia
Muscle

Connections between RV&T



Deep Venous incompetence

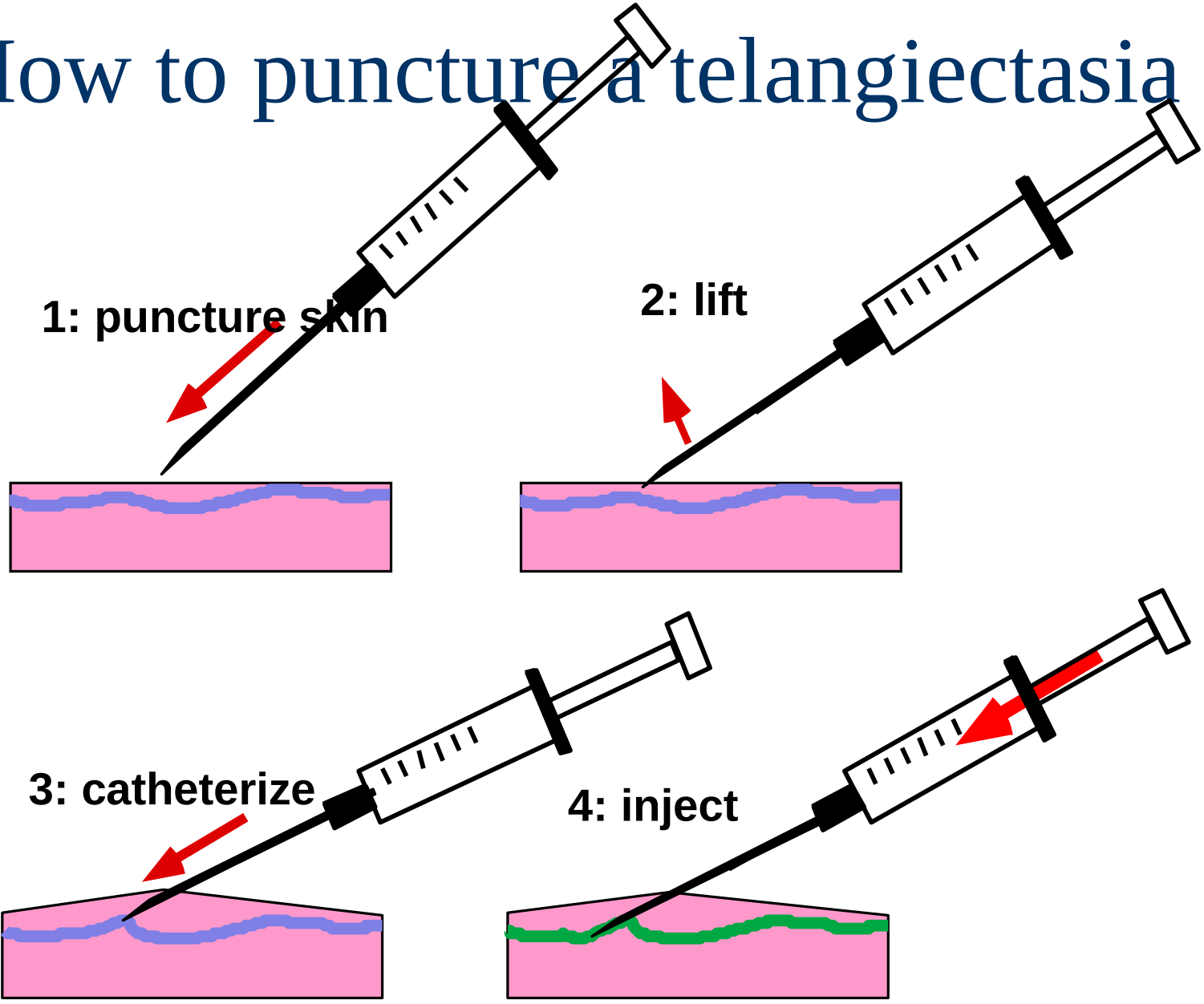
- Microsclerotherapy of reticular veins and telangiectasias is not recommended in case of deep venous incompetence with chronic venous insufficiency C≥3.

Bad Technique:

Clumsiness, bad catheterism:

- consequences:
  - inefficacy
  - necrosis, scars
- Need for adequate training and advice from a skilled colleague

How to puncture a telangiectasia



Equipment:

- Best needles:
  - Telangiectasias: 30G 1/2
  - Reticular Veins: 26G 5/8

Technical Faults

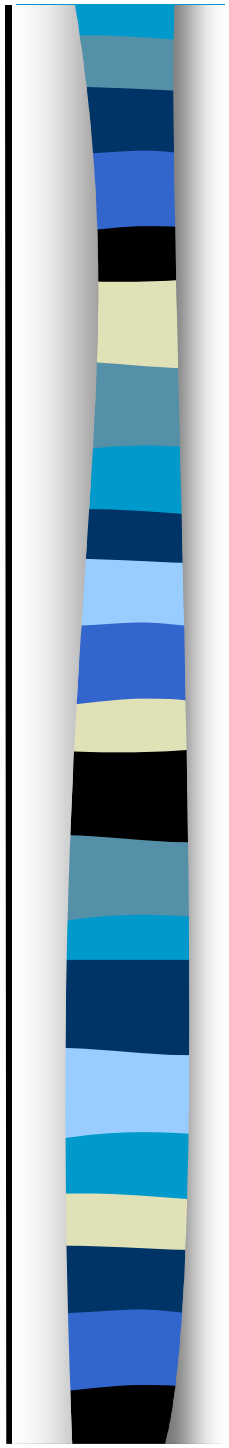
- Concentration
  - Too weak: inefficacy,
  - Trop strong: thrombus, pigmentations, necrosis, matting.
- Pressure
  - Trop strong: matting, necrosis.
- Volume
  - Too important: matting, pigmentations.

Explanations:

- Transparietal burn
  - Too strong concentration
  - Thin venous wall: extravasation, interstitial lesion
  - Dystrophic wall
- Extravasation
  - pretibial
  - malleolar.
- Inflammatory reaction
  - neovasculogenesis,
  - pigmentation

« Pigmentations & Stains »:

- Hematomas, ecchymosis
- Intra-venous Micro-thrombi ⇒
  - Hémosiderin deposits, thanks to macrophages they disappear spontaneously if stasis is corrected
  - Stimulation of melanogenesis by inflammatory reaction (less frequent, more durable)



Early « microthrombectomy »

- Telangiectasies ∅ > 0.6 mm almost always make a thrombus.
- To evacuate ASAP by needle micro-puncture.

Concentrations to begin with:

- Polidocanol:
  - 0.25 or 0.5 % for T&VR
- Chromated Glycerin
  - 3/4 diluted with normal saline or Lidocaine
- Na Tetradecyl sulfate
  - 0.1 or 0.2 %

Problems of pressure.

Pressure	Diameter	Applied force
> 300 mmHg	5 mm	250 gF

Insulin (1cm^3)

180 mmHg	8 mm	250 gF

2,5 cm^3 syringe

Little syringes increase the risk of extravasation and necrosis (micro A-V fistulas, counter-current injections)

Proportional representation of a 0,5 cm^3 cylinder

Diam cm	Length
1,4	0,32
0,8	1,00
0,5	2,55
0,2	15,92
0,1	63,69

Volumes.

- For telangiectasias: do not inject more than what is necessary to cover a 3 cm diameter disk.
- Do not « take advantage »
  of a « too nice » diffusion
- Multiply as much as possible small volume injections

In case of inefficacy:

- Too weak concentration : polidocanol 0.25% ⇒ skip to 0.5%
- Concentration OK ⇒ hold the pressure on the syringe for some seconds
- Try foam same concentration
- Change the sclerosing agent (sclerodex®)

Foam and T&VR:

- Pros
  - Foamed Ae 0.25% stronger than liquid 0.25% (too much ?)
  - Better diffusion
  - Less bleeding
  - Foam is necessary for treatment of varices
- Cons
  - Not better than liquid 0.5%
  - Micro-thrombosis
  - Not stable (in the syringe)
  - General complications (visual)

Compression:

- Mild local compression on injection points with a small cotton ball + adhesive tape is enough for VR&T.
- It is different for varices.
- If compression is necessary for other reasons, it must be kept.
- No conclusive study published
  (Weiss Vs Guex).

Other advice:

- Avoid heat excess
- and sunbathing during treatment and 2-3 weeks after.

Microsclero Vs Lasers: pros & cons

- Sclero
  - More efficient
  - Less bad results
  - Faster sessions
  - Less painful
  - Cheaper
  - Requires more skill
  - Uses a needle

- Lasers
  - Less efficient
  - More skin lesions
  - Longer sesssions
  - More painful
  - More expensive
  - Requires less skill
  - “High tech” fame

LASER is the acronym for:

Latest Attempt to Secure Extra Revenue

Good conditions:

- Good lighting, rather indirect.
- Patient comfortable, relaxed.
- Doctor sitting down.
- Magnifying goggles, transillumination, polarized light.
- Video projection ($$$).

Conclusions:

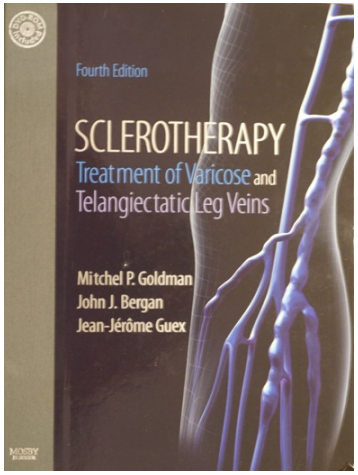
- Normally it DOES work !
- If it does not : look for the error !

It doesn’t work !

Diagnosis of an error:

- I left varices, perforators or reticular veins.
- I didn’t detect the deep incompetence
- The sclerosing agent was too weak
- I’m bad at injections
- Or it is not finished, I must continue.

GOLDMAN MP, BERGAN JJ, GUEX JJ.
Sclerotherapy. Treatment of varicose and telangiectatic leg veins. Fourth edition
Mosby-Elsevier, London, 2007



GUEX J.-J.
Indications for the sclerosing agent Polidocanol®
J Dermatol Surg Oncol 1993;19:959-961
GUEX J.-J.
Microsclerotherapy
Seminars In Dermatology 1993,12(2);129-134
GUEX J.-J.
Le traitement des micro-varices, varicosités et télangiectasies en 1992
Phlébologie 1992;45(4):401-407.
GUEX J.-J.
Inutilité de la compression après sclérothérapie des micro-varices et télangiectasies
Phlébologie 1994;47(4):371-375.
GUEX J.-J.
Le matériel utilisé en sclérothérapie
Phlébologie 1997;50(2):223-228.