

Controversies & updates in Vascular Surgery

Paris - february 09 2019

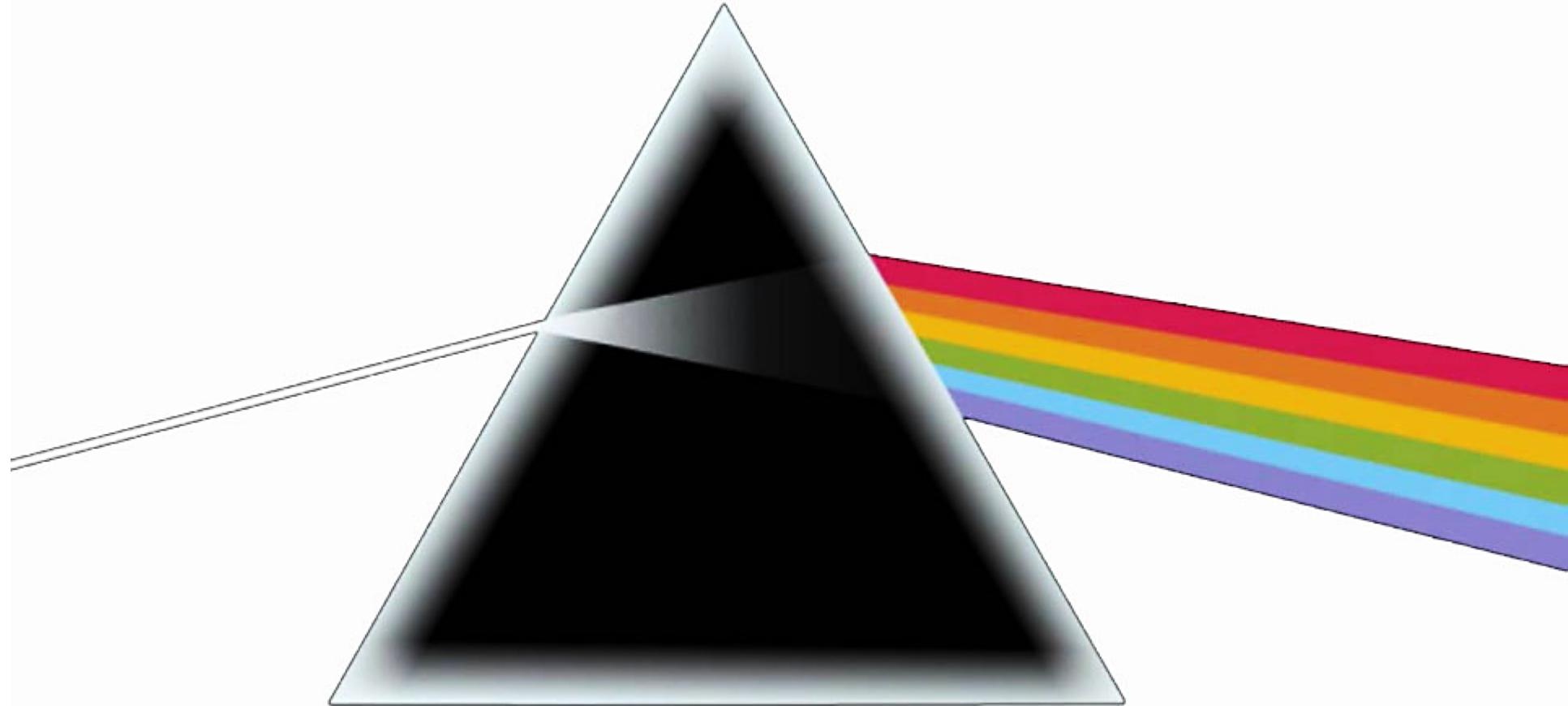
Venous session

Recurrence at the popliteal fossea

Pathogenesis and duplex investigation

Philippe LEMASLE

Le Chesnay - France



I have no financial relationship to disclose

Time of the surgery

- recurrence at the popliteal fossa ≈
 - refluxing stump
 - residual junction

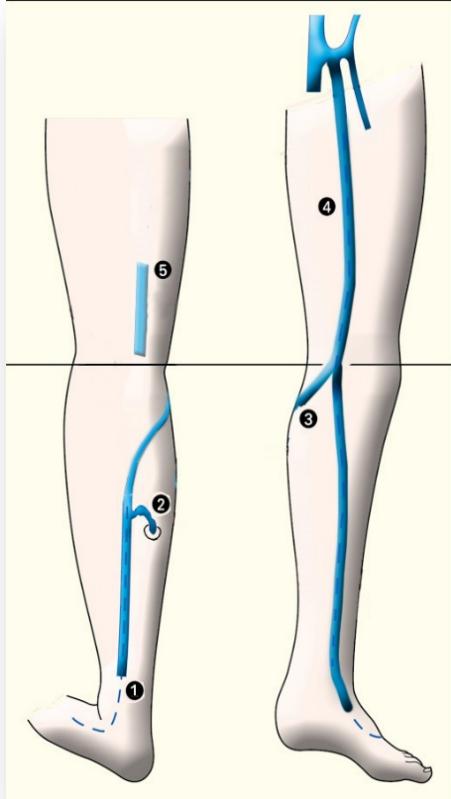
but now ... choosing wisely

- the first-line treatment for saphenous veins is thermal ablation
- with very few exceptions, conventional surgery should not be proposed for the treatment of saphenous veins

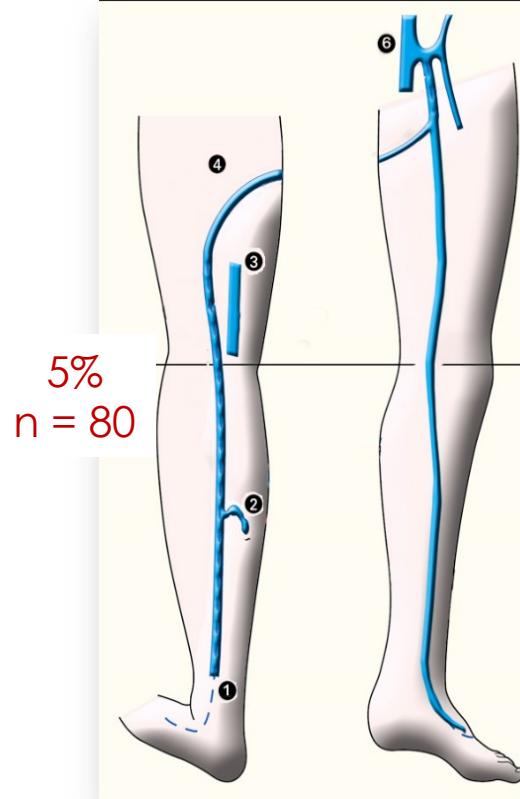
Saphenopopliteal junction : anatomical reminder

Saphenopopliteal junction : anatomical reminder

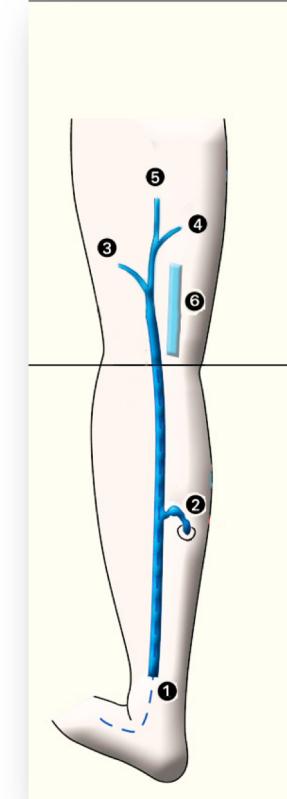
- small saphenous veins WITHOUT sphenous-popliteal junction



court type



long type

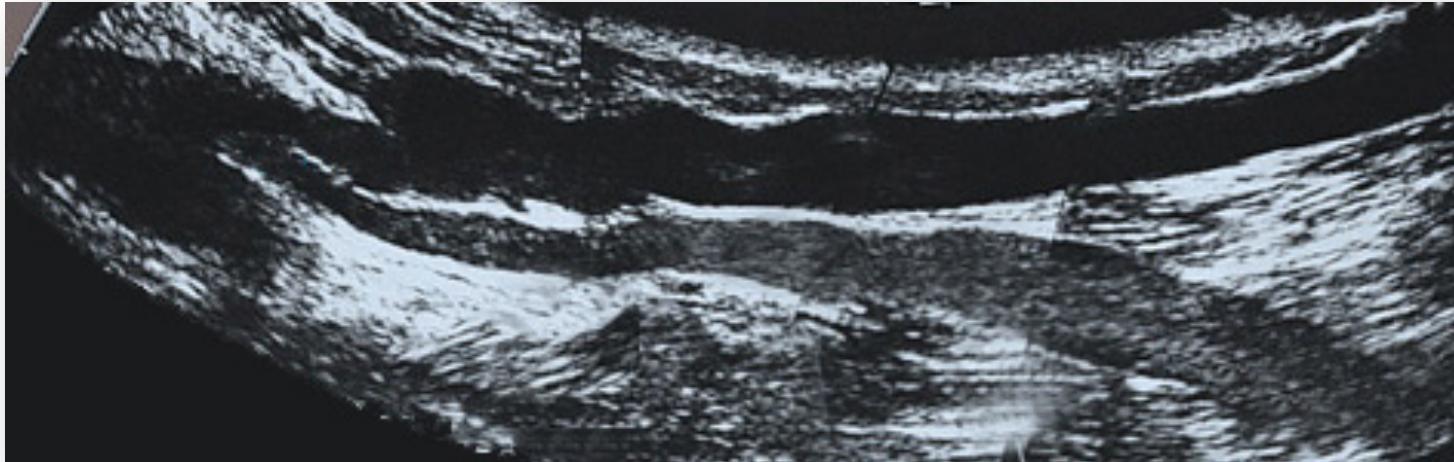


plexiform ending

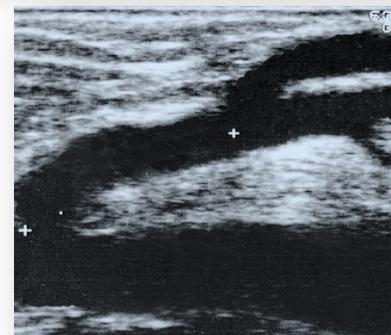
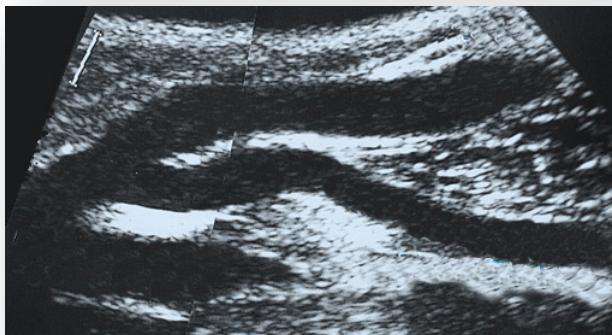


Saphenopopliteal junction : anatomical reminder

- common junction with the common trunk of the gastrocnemius veins



21 - 26 %
in a varicose vein population



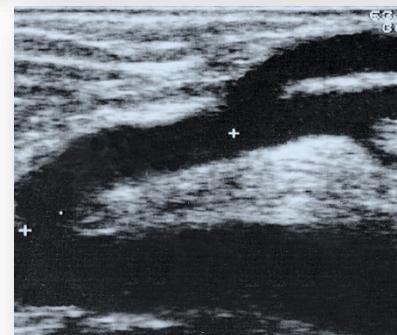
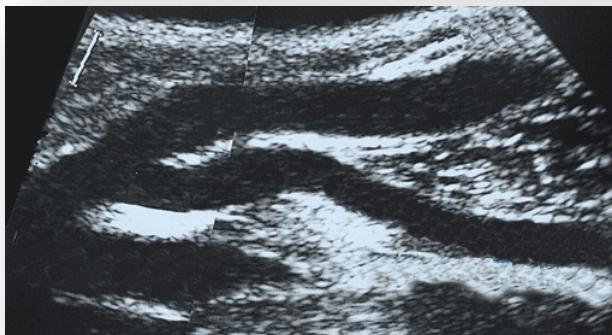
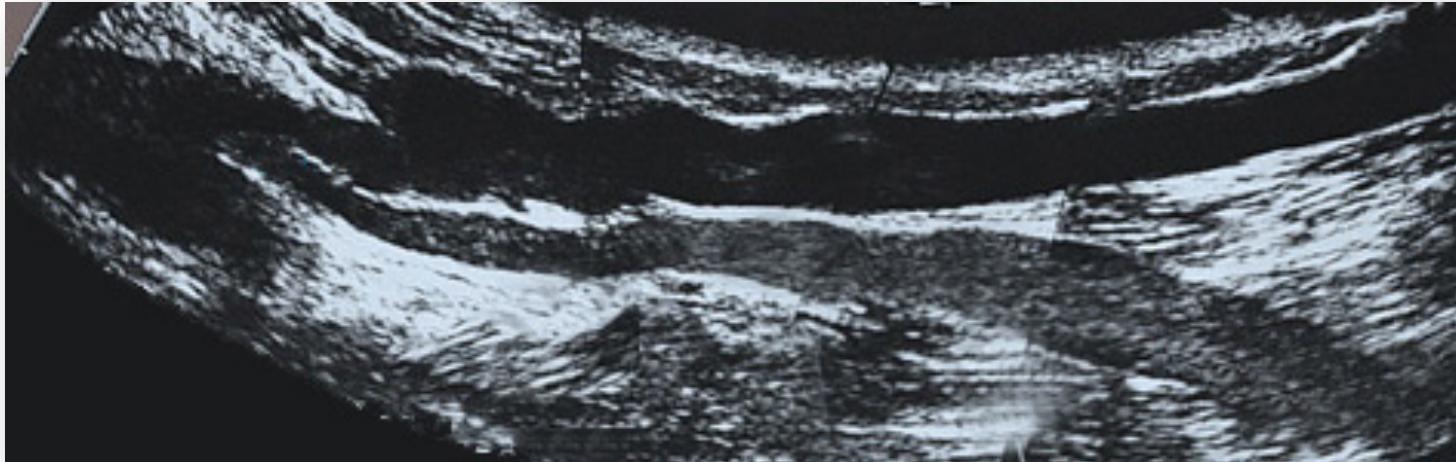
Franco G. Intérêt de l'écho-doppler de la saphène externe ... Phlébologie 1990;43 (1):135-45

Gorny P. Chirurgie de la saphène externe ... Phlébologie 1994;47 (4):383-8

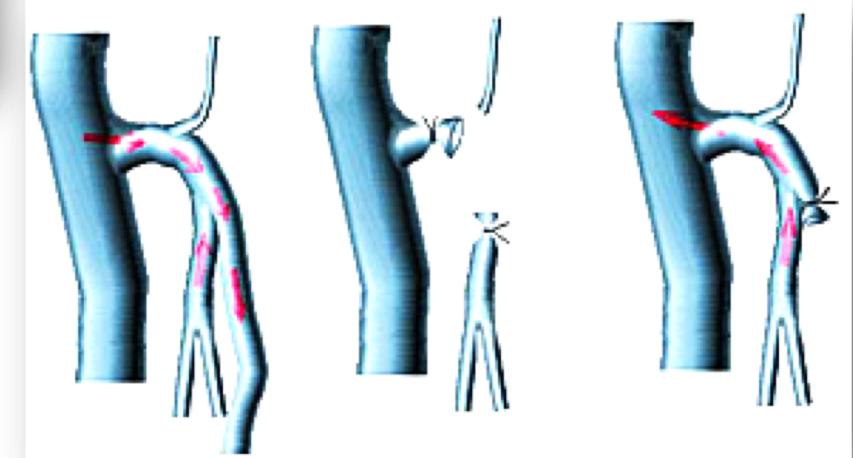
Lemasle P. La cartographie veineuse superficielle. Considérations pratiques. Phlébologie 2000;53 (1):77-105

Saphenopopliteal junction : anatomical reminder

- common junction with the common trunk of the gastrocnemius veins



21 - 26 %
in a varicose vein population

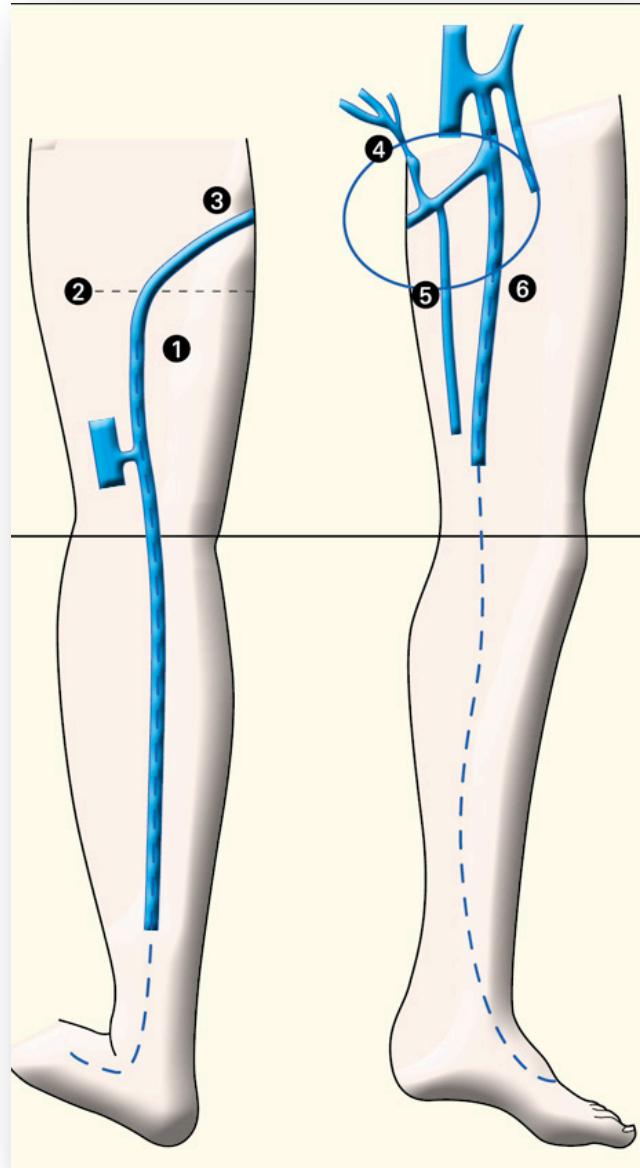


Franco G. Intérêt de l'écho-doppler de la saphène externe ... Phlébologie 1990;43 (1):135-45

Gorny P. Chirurgie de la saphène externe ... Phlébologie 1994;47 (4):383-8

Lemasle P. La cartographie veineuse superficielle. Considérations pratiques. Phlébologie 2000;53 (1):77-105

Saphenopopliteal junction : anatomical reminder



anastomose of Giacomini (1) (3)

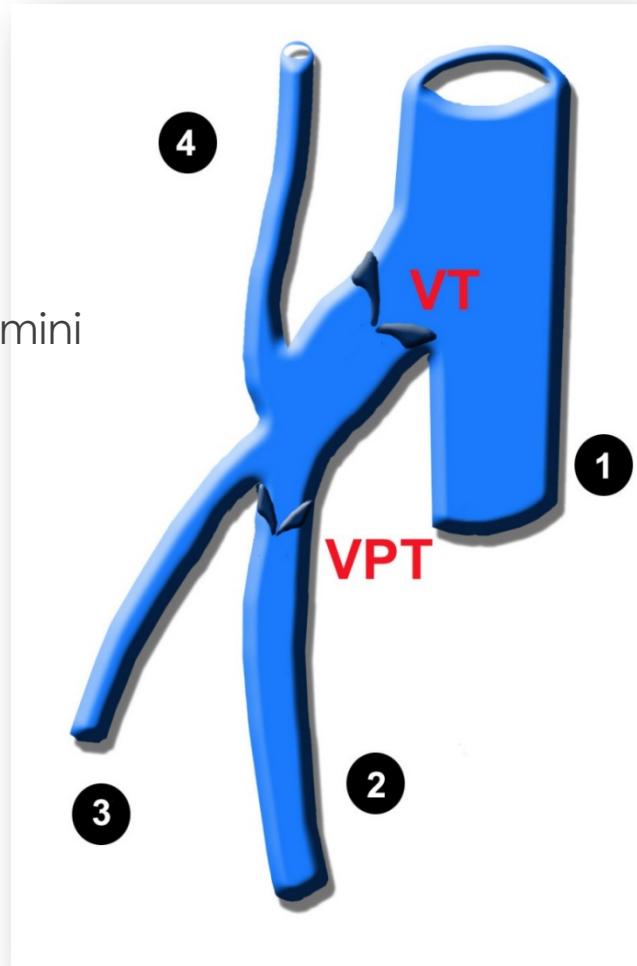
= anatomo-hemodynamic crossroads between

- SFJ
- SSV
- GSV (6) & SSV trunks
- posterior accessory saphenous vein (5)
- veins of perineal origin (4)

Saphenopopliteal junction : hemodynamic reminder

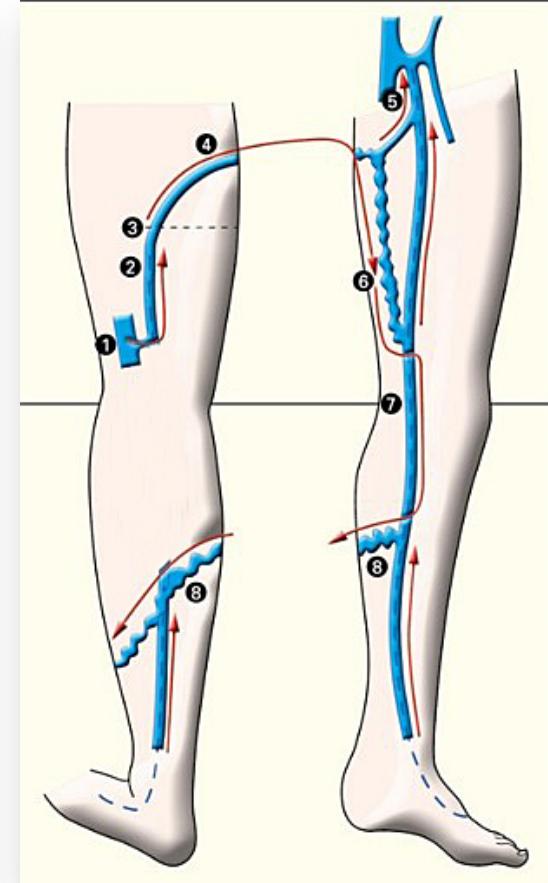
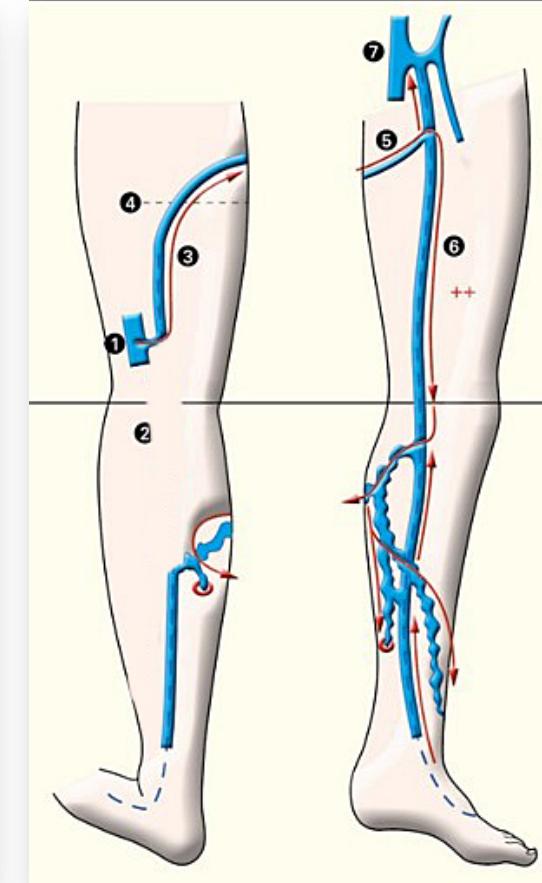
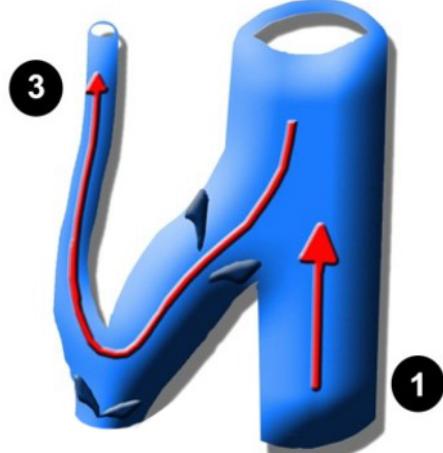
Saphenopopliteal junction : hemodynamic reminder

- (1) popliteal vein
- (2) SSV
- (3) tributary
- (4) anastomose of Giacomini

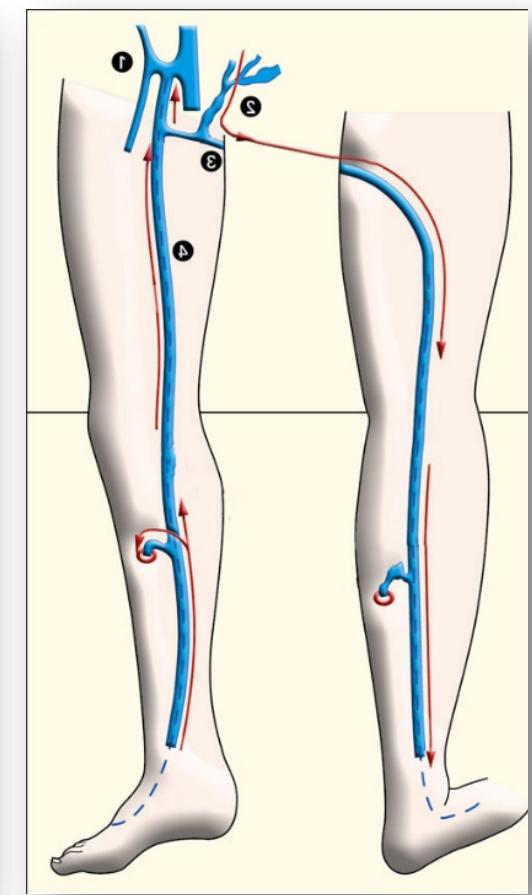
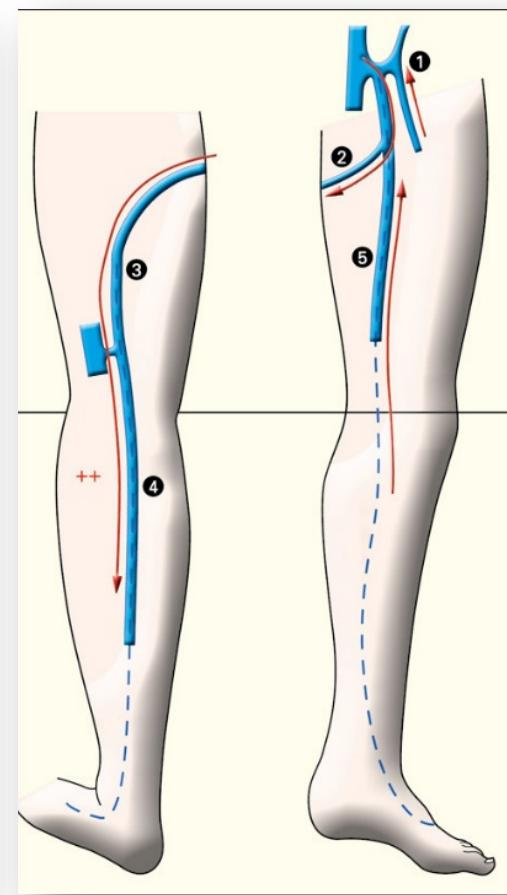
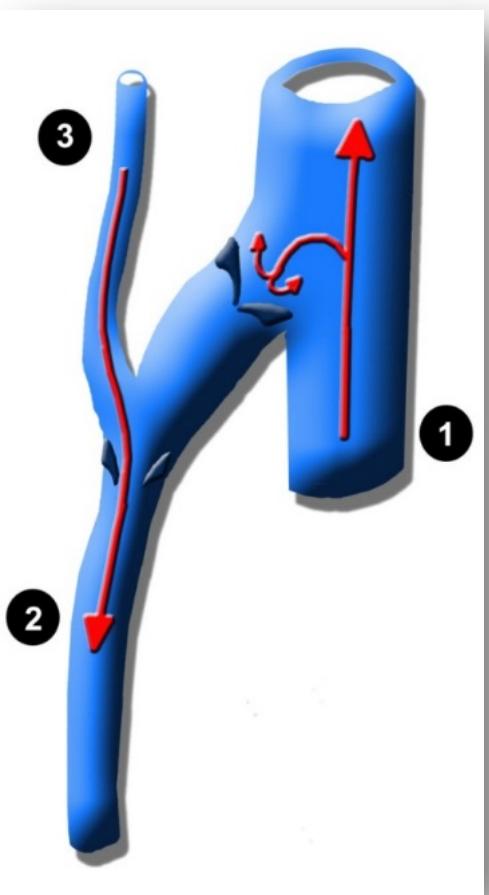


varicose vein topography =

expression of the hemodynamic status
of these 2 valves



= transmission of reflux **from bottom to top**



= transmission of reflux from top to bottom

"Falses" popliteal recurrences

Poplitea fossa perforator (PFP)

Poplitea fossa perforator (PFP)

- characteristic clinical aspect
 - 2cm above knee fold, posterolateral side
 - dilated, tortuous, subcutaneous vein, which cross the PVS (interfascial) for feeding a posteromedial varicose calf
- often associated with a form of recurrent PVS
- However
 - different embryological origin
 - never connection between SPF et PFP

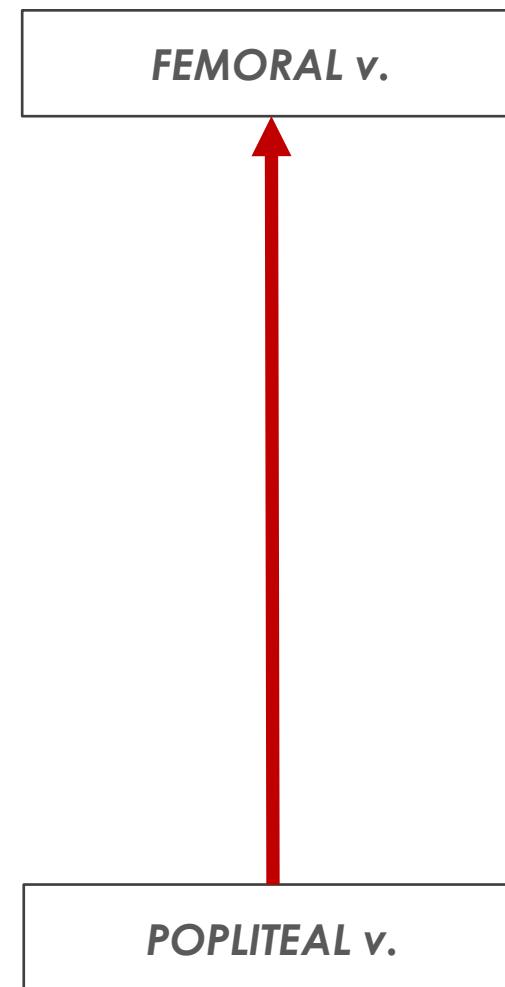
>> SO WHY ... ?



Poplitea fossa perforator (PFP)

- frequent venous functional compression in Hunter's canal

>> development of collateral pathway ...
saphenopopliteal junction is in one



Gillot C. Variations et valvulation du système tronculaire fémoro-poplité. Phlébologie 1991;44:537-76

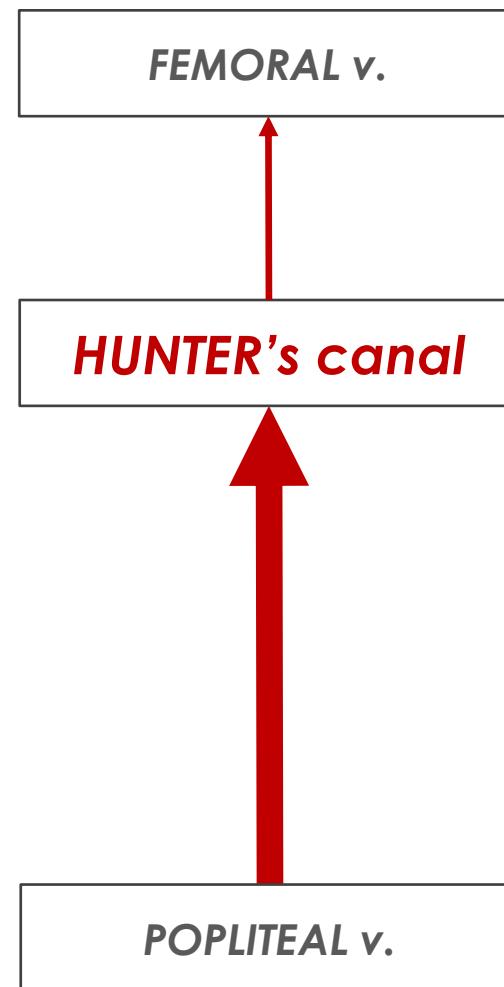
Gillot C. Les obstacles posturaux de la veine poplitée. Leur rôle dans l'insuffisance veineuse profonde jambière. Phlébologie 1992;45 (3):556-63

Gillot C. Atlas anatomique des dispositifs veineux superficiels des membres inférieurs. Editions phlébologiques françaises. Paris, 1998

Poplitea fossa perforator (PFP)

- frequent venous functional compression in Hunter's canal

>> development of collateral pathway ...
saphenopopliteal junction is in one



Gillot C. Variations et valvulation du système tronculaire fémoro-poplité. Phlébologie 1991;44:537-76

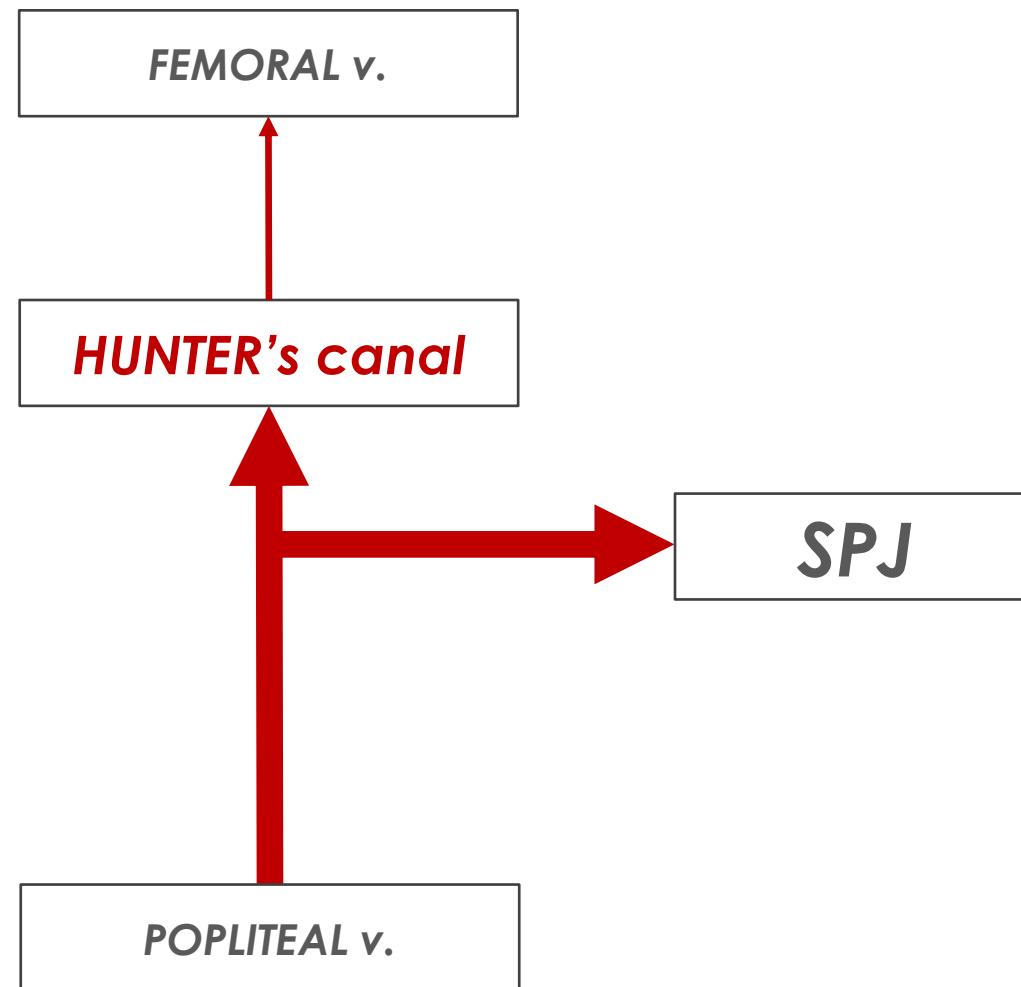
Gillot C. Les obstacles posturaux de la veine poplitée. Leur rôle dans l'insuffisance veineuse profonde jambière. Phlébologie 1992;45 (3):556-63

Gillot C. Atlas anatomique des dispositifs veineux superficiels des membres inférieurs. Editions phlébologiques françaises. Paris, 1998

Poplitea fossa perforator (PFP)

- frequent venous functional compression in Hunter's canal

>> development of collateral pathway ...
saphenopopliteal junction is in one



Gillot C. Variations et valvulation du système tronculaire fémoro-poplité. Phlébologie 1991;44:537-76

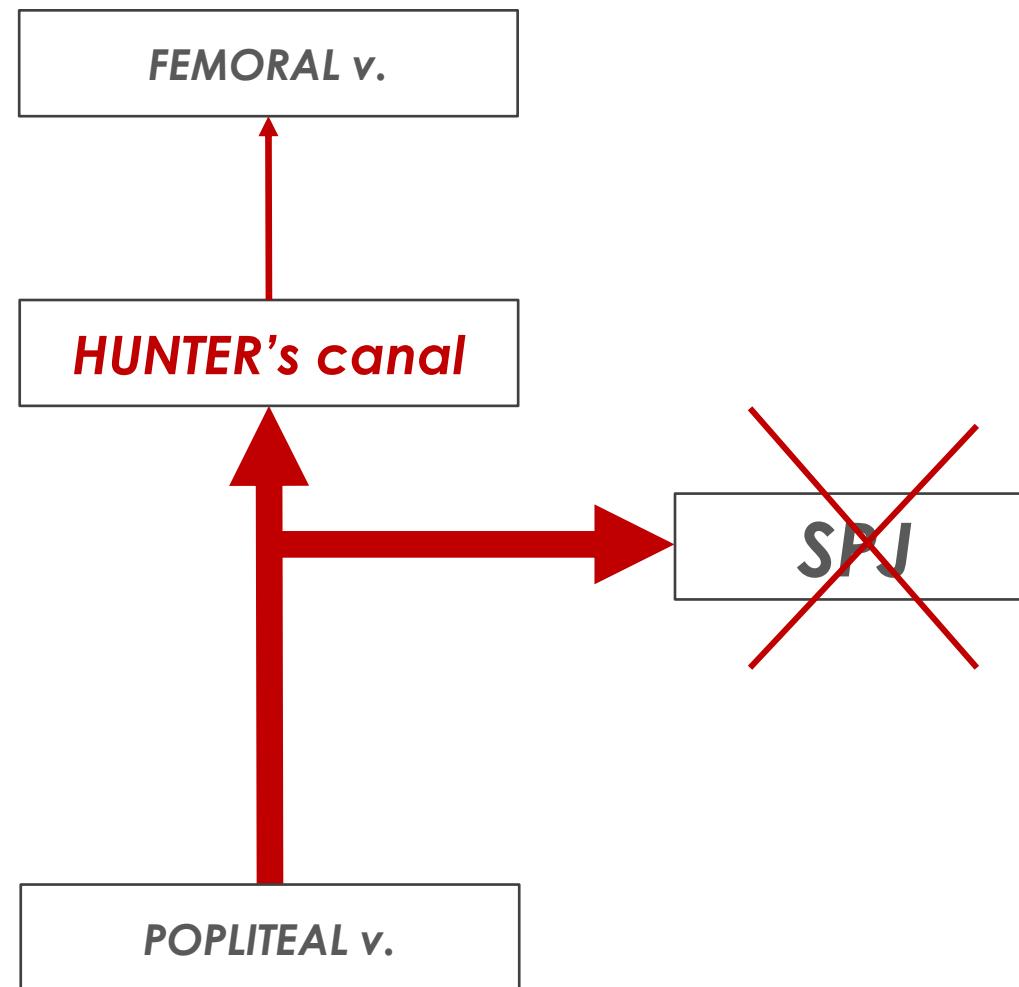
Gillot C. Les obstacles posturaux de la veine poplitée. Leur rôle dans l'insuffisance veineuse profonde jambière. Phlébologie 1992;45 (3):556-63

Gillot C. Atlas anatomique des dispositifs veineux superficiels des membres inférieurs. Editions phlébologiques françaises. Paris, 1998

Poplitea fossa perforator (PFP)

- frequent venous functional compression in Hunter's canal

>> development of collateral pathway ...
saphenopopliteal junction is in one



Gillot C. Variations et valvulation du système tronculaire fémoro-poplité. Phlébologie 1991;44:537-76

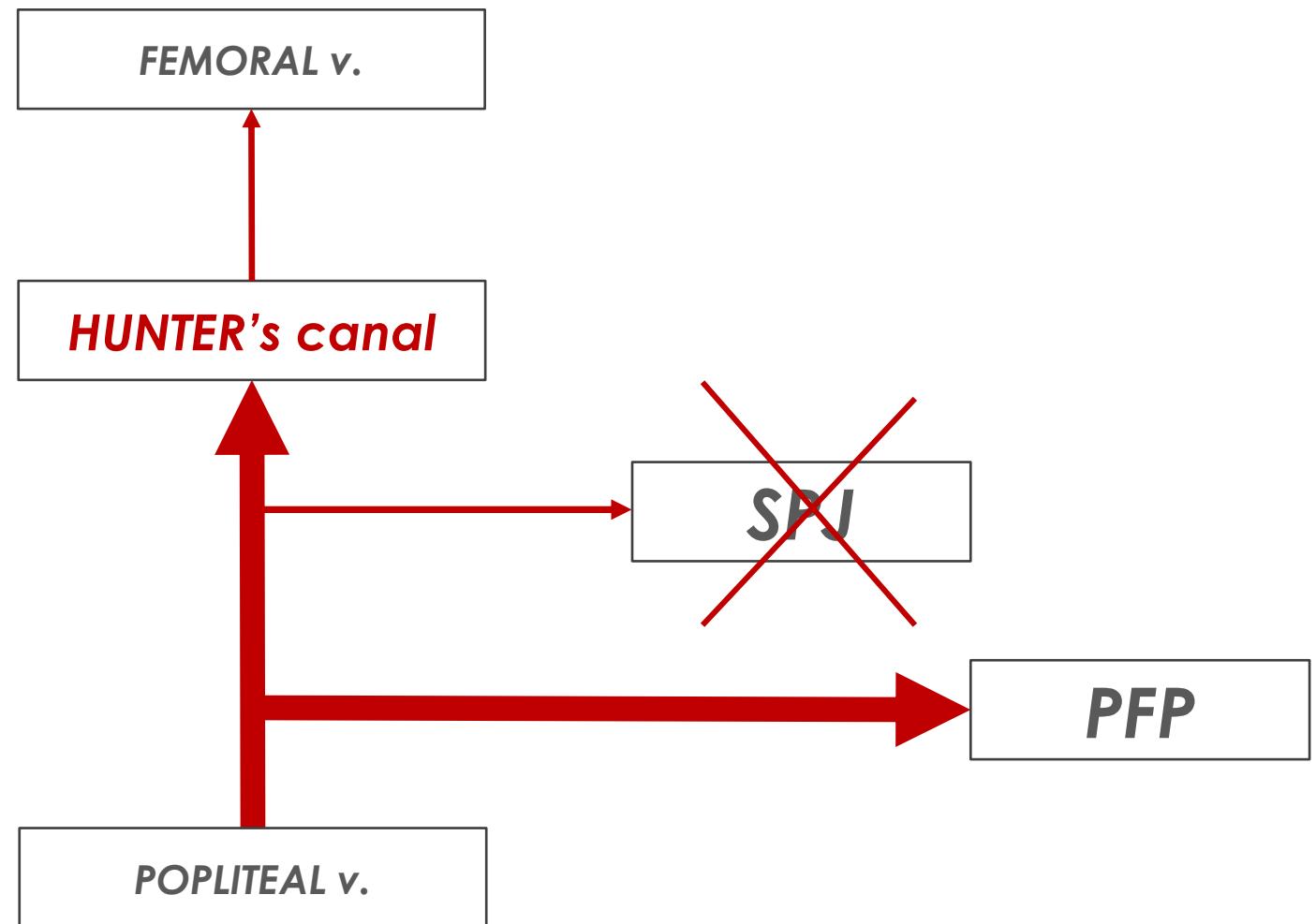
Gillot C. Les obstacles posturaux de la veine poplitée. Leur rôle dans l'insuffisance veineuse profonde jambière. Phlébologie 1992;45 (3):556-63

Gillot C. Atlas anatomique des dispositifs veineux superficiels des membres inférieurs. Editions phlébologiques françaises. Paris, 1998

Poplitea fossa perforator (PFP)

- frequent venous functional compression in Hunter's canal

>> development of collateral pathway ...
saphenopopliteal junction is in one



Gillot C. Variations et valvulation du système tronculaire fémoro-poplité. Phlébologie 1991;44:537-76

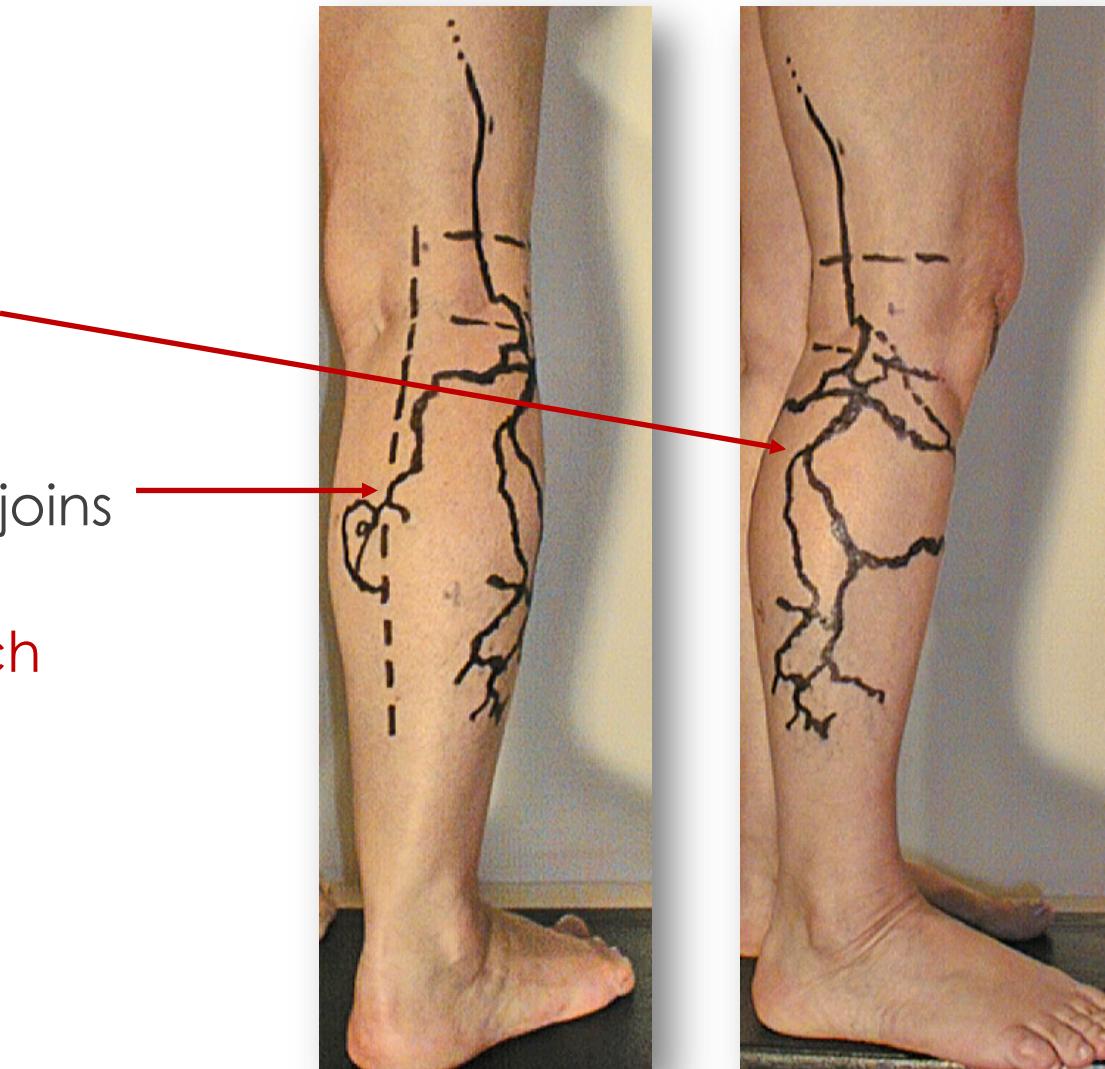
Gillot C. Les obstacles posturaux de la veine poplitée. Leur rôle dans l'insuffisance veineuse profonde jambière. Phlébologie 1992;45 (3):556-63

Gillot C. Atlas anatomique des dispositifs veineux superficiels des membres inférieurs. Editions phlébologiques françaises. Paris, 1998

Superficial fibular nerve varicosis

Superficial fibular nerve varicosis

- characteristic clinical aspect
 - posterolateral **subcutaneous** tributary
= path of the superficial fibular nerve
 - posterior **subcutaneous** tributary, which joins PVS
= path of fibular communicating branch



Lemasle P. Veine du nerf sciatique et maladie variqueuse. Aspects écho-anatomiques et hémodynamiques. Phlébologie 2001, 54 : 219-228

Lemasle P. Atlas d'écho-anatomie. La varicose pelvienne de la femme (T. 5), 2006 Laboratoires IPSEN et TONIPHARM, Paris.

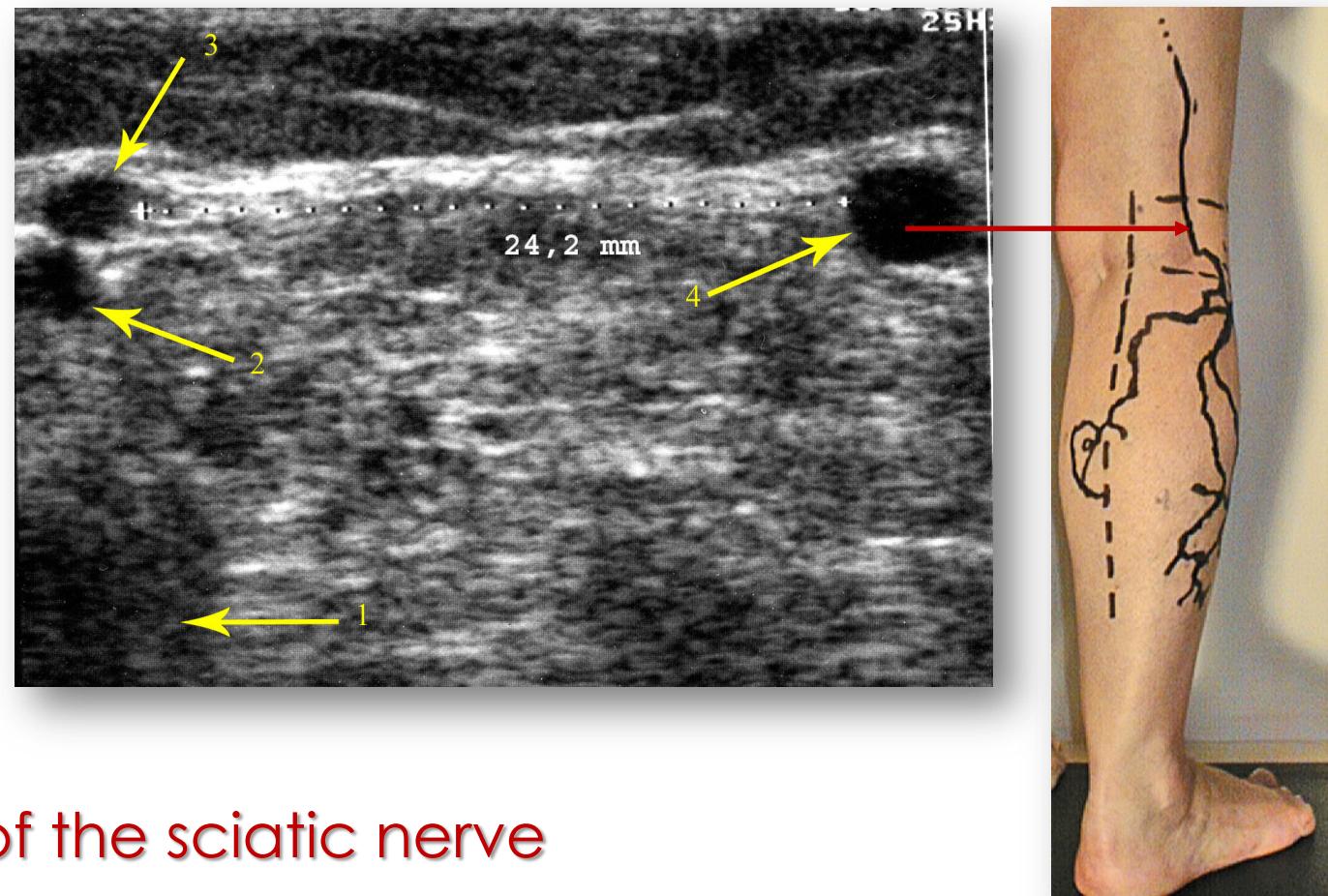
Lemasle P, Greiner M. Specific criteria of the transcutaneous DUS in unusual causes of lower limb varicose veins. Phlebolymphology in press

Superficial fibular nerve varicosis

- ultrasound criteria

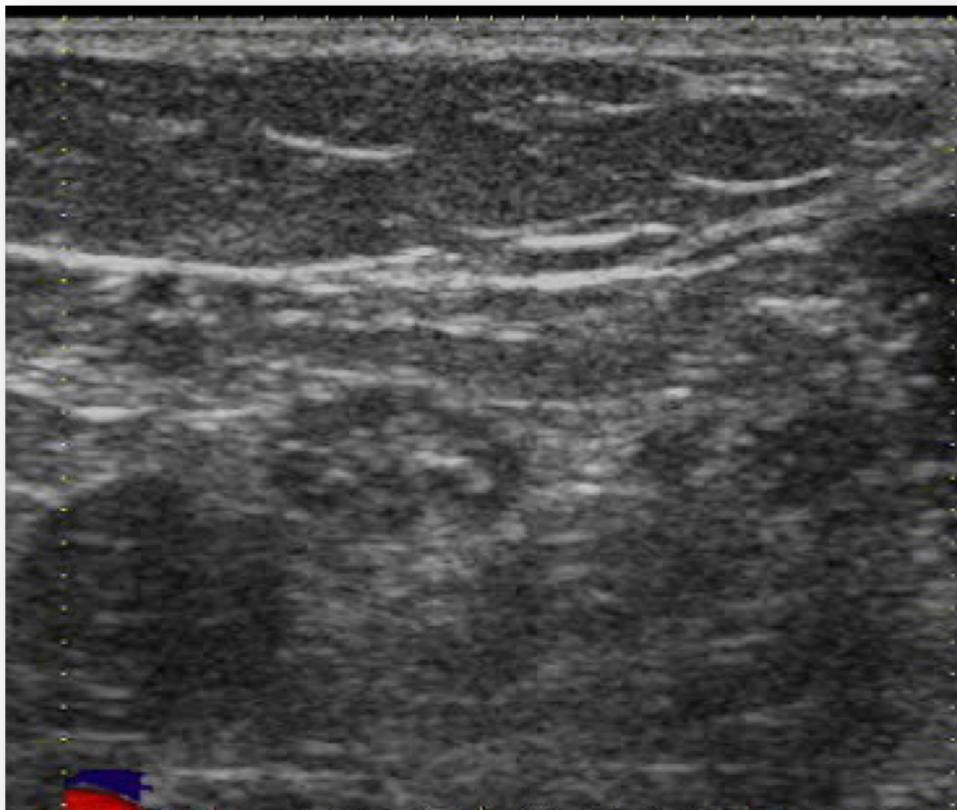
- a tubular refluxing venous trunk
- parallel but situated outside SSV
- interfascial

indicates a varicose vein developed in the territory of the superficial fibular nerve and its fibular communicating branch

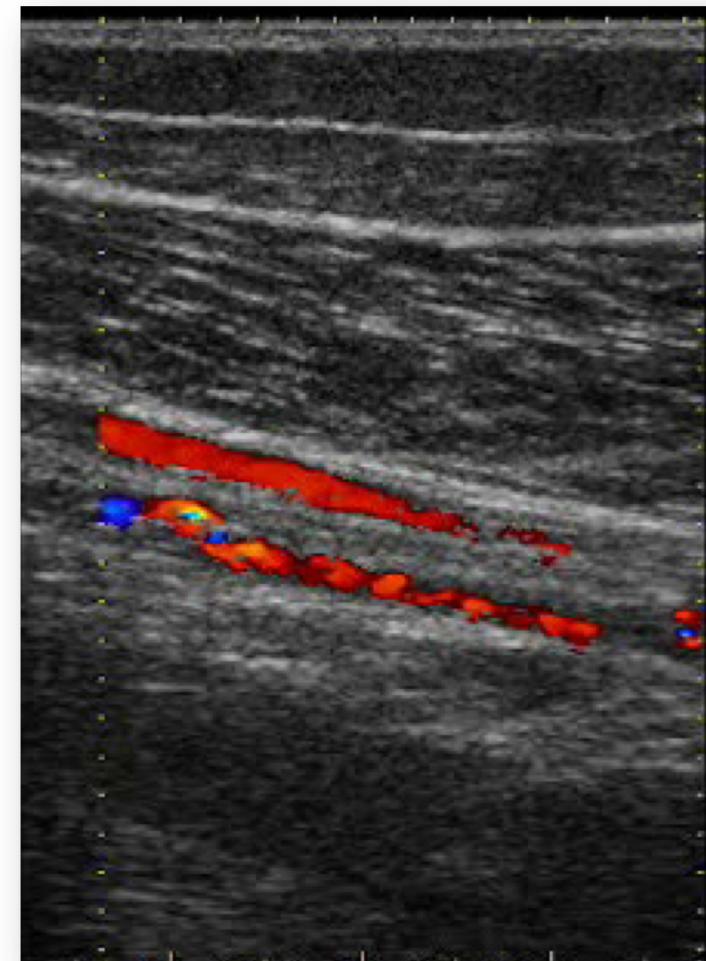


= pathognomonic of varicosis of the sciatic nerve

Superficial fibular nerve varicosis



small caliber refluxing plexiform network located within the tibial & common fibular' sheath



small, tubular, refluxing veins located within the sciatic' sheath

Conclusion

Duplex-scan is the necessary and sufficient check-up
to assess popliteal fossa recurrence

