

Ultrasound Guide Foam Sclerotherapy Tips and Tricks !



Dr Pierre COMBES
Clinique Aguiléra - Biarritz - France

dr.pierre.combes@mes-varices-info.fr

Pre treatment assessment



Clinical examination + Duplex scan assessment
(often leading to a mapping)

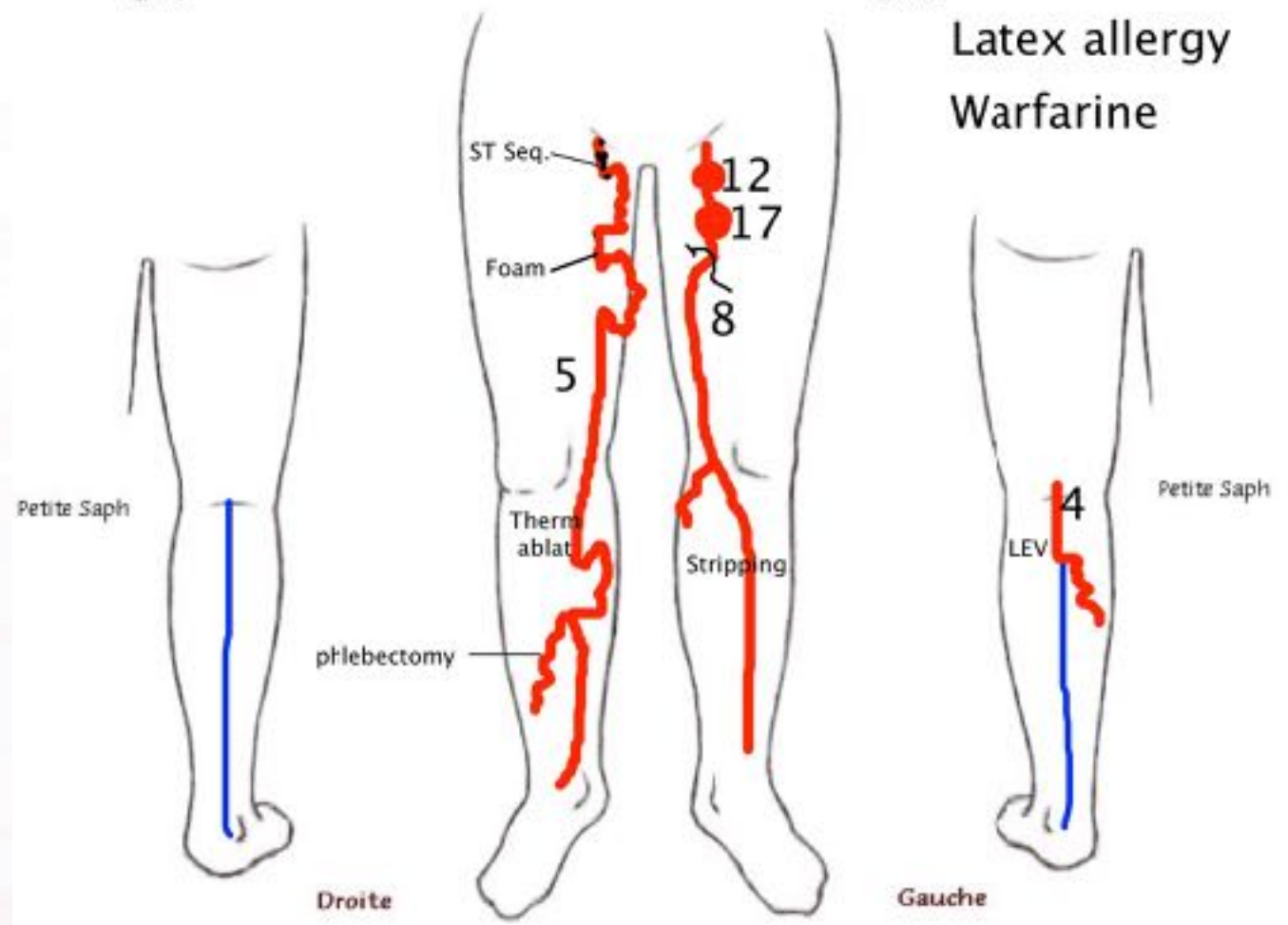
PRE TREATMENT ASSESSMENT



Calibre tronc Grde Saph Dte (mm)

Calibre tronc Grde Saph Gche (mm)

Latex allergy
Warfarine



FOAM PRODUCTION

Phlebology

Original Article

European guidelines for sclerotherapy in chronic venous disorders

E Rabe¹, FX Breu², A Cavezzi³, P Coleridge Smith⁴, A Frullini⁵, JL Gillet⁶, JJ Guex⁷, C Hamel-Desnos⁸, P Kern⁹, B Partsch¹⁰, AA Ramelet¹¹, L Tessari¹² and F Pannier¹³; for the Guideline Group

Recommendation 22: We recommend a ratio of liquid sclerosant to gas for the production of a sclerosing foam of **1 + 4 (1 part liquid + 4 parts air)** to 1 + 5 (GRADE 1A). When treating varicose veins (C2), viscous, fine-bubbled and homogenous foam is recommended (GRADE 1C).

Phlebology

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FOAM PRODUCTION : TESSARI



FOAM PRODUCTION : DOUBLE CONNECTOR

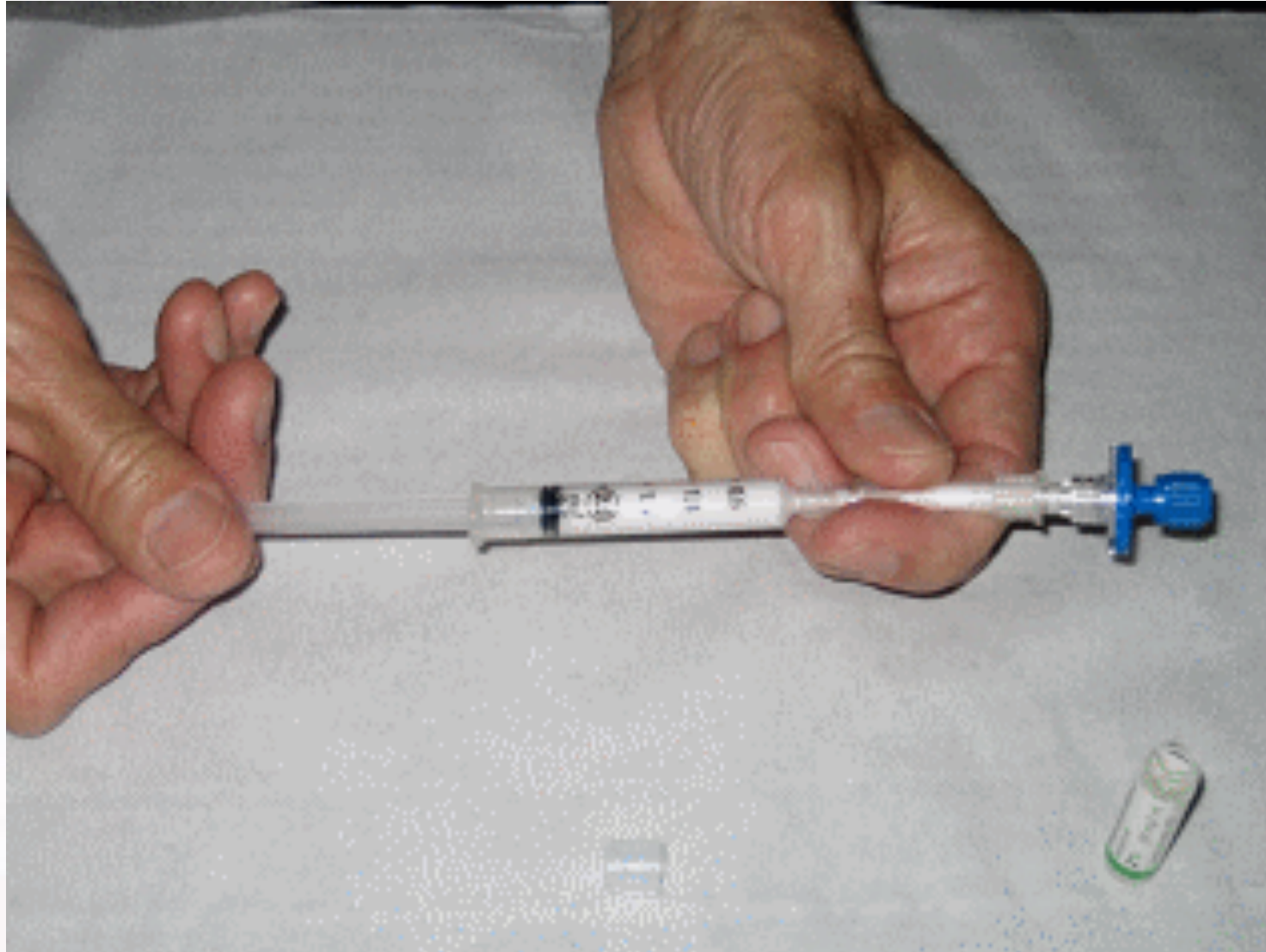


FOAM PRODUCTION : EASYFOAM

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FOAM PRODUCTION : SCLERIVEIN



Which Sclerosing Agent ?

Polidocanol (AETOXISCLEROL)



STS (FIBROVEIN - THROMBOVAR)



Chrom Alum (SCLEREMO)



TACTICS TO PERFORM FS

(European Guidelines – Rabe E. et al. Phlebology 2013)

Successful sclerotherapy requires thorough planning. Sclerotherapy is generally performed in the order of proximal to distal leakage points, and proceeding from the larger to the smaller varicose veins.

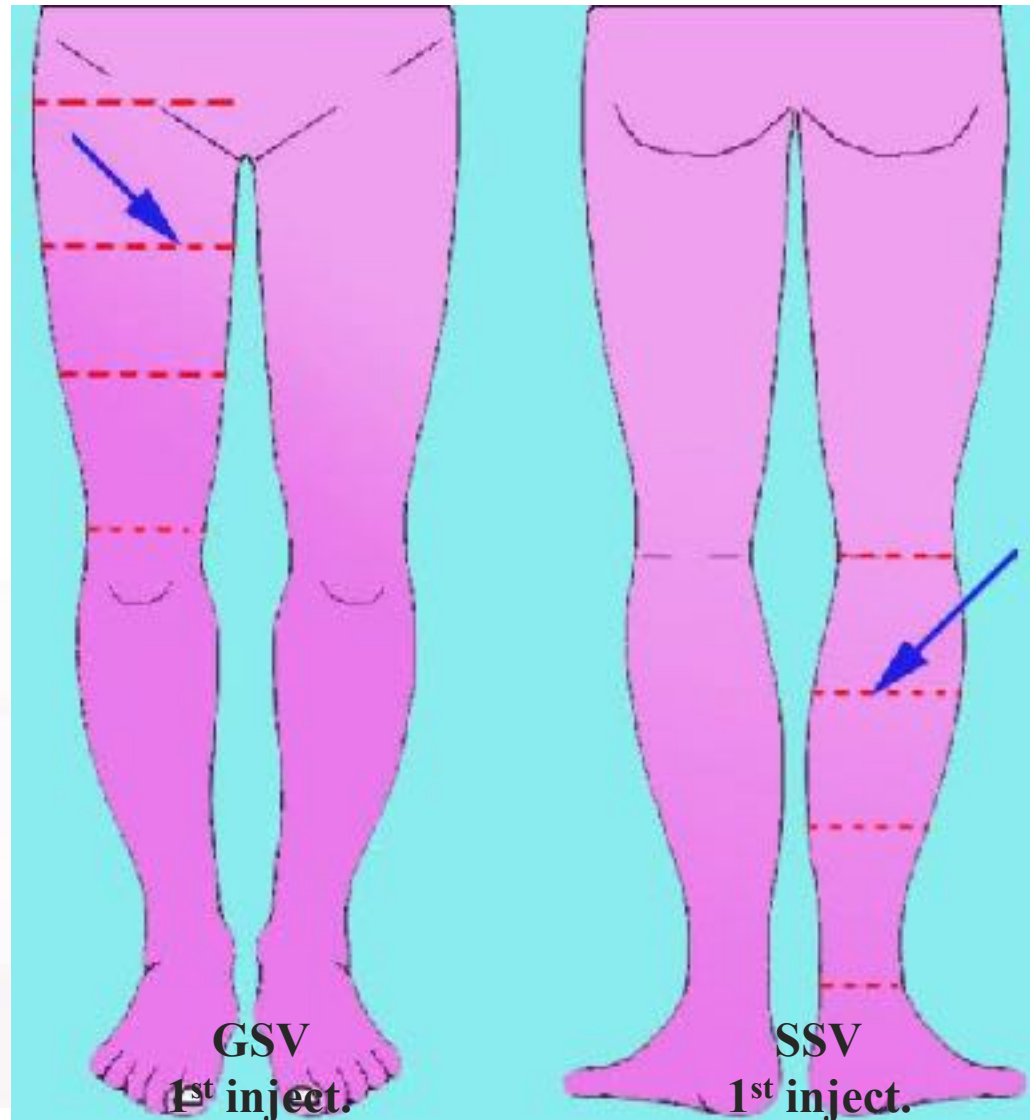
When treating incompetent saphenous junctions and saphenous stems by direct puncture, it is recommended that one venous puncture should be performed in the proximal thigh (great saphenous vein and anterior accessory saphenous vein) area;

Staged technique (French technique)

First injection site in case of an axial reflux of the GSV and SSV

✓ Not too far from SFJ
(for better effectiveness)

✓ Not too close to SFJ
(safety reasons: to avoid the arteries in the groin or in the popliteal fossa)



Deactivation of STS (sodium tetradecyl sulphate) Watkins study's

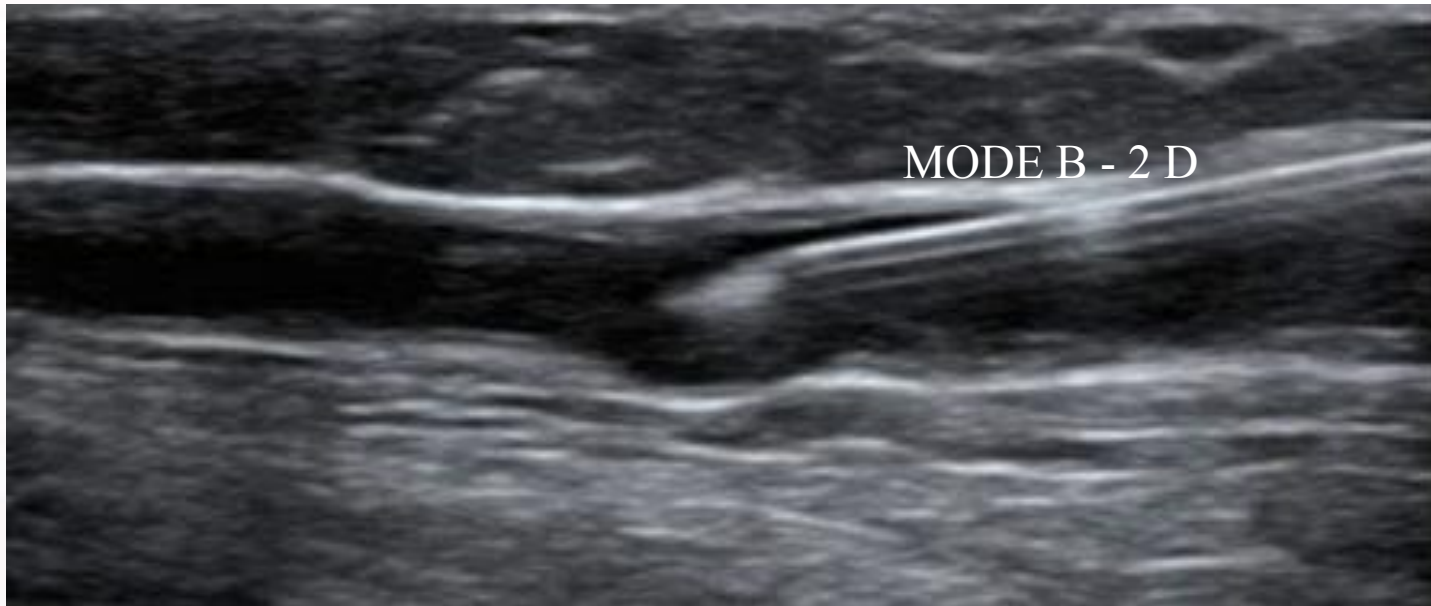
0.5 mL of blood deactivates 1 mL of 3% STS (liquid)

➤ **Staged technique could be more adequate: “to introduce fresh sclerosant along the length of the vein could improve the efficacy of sclerotherapy”**

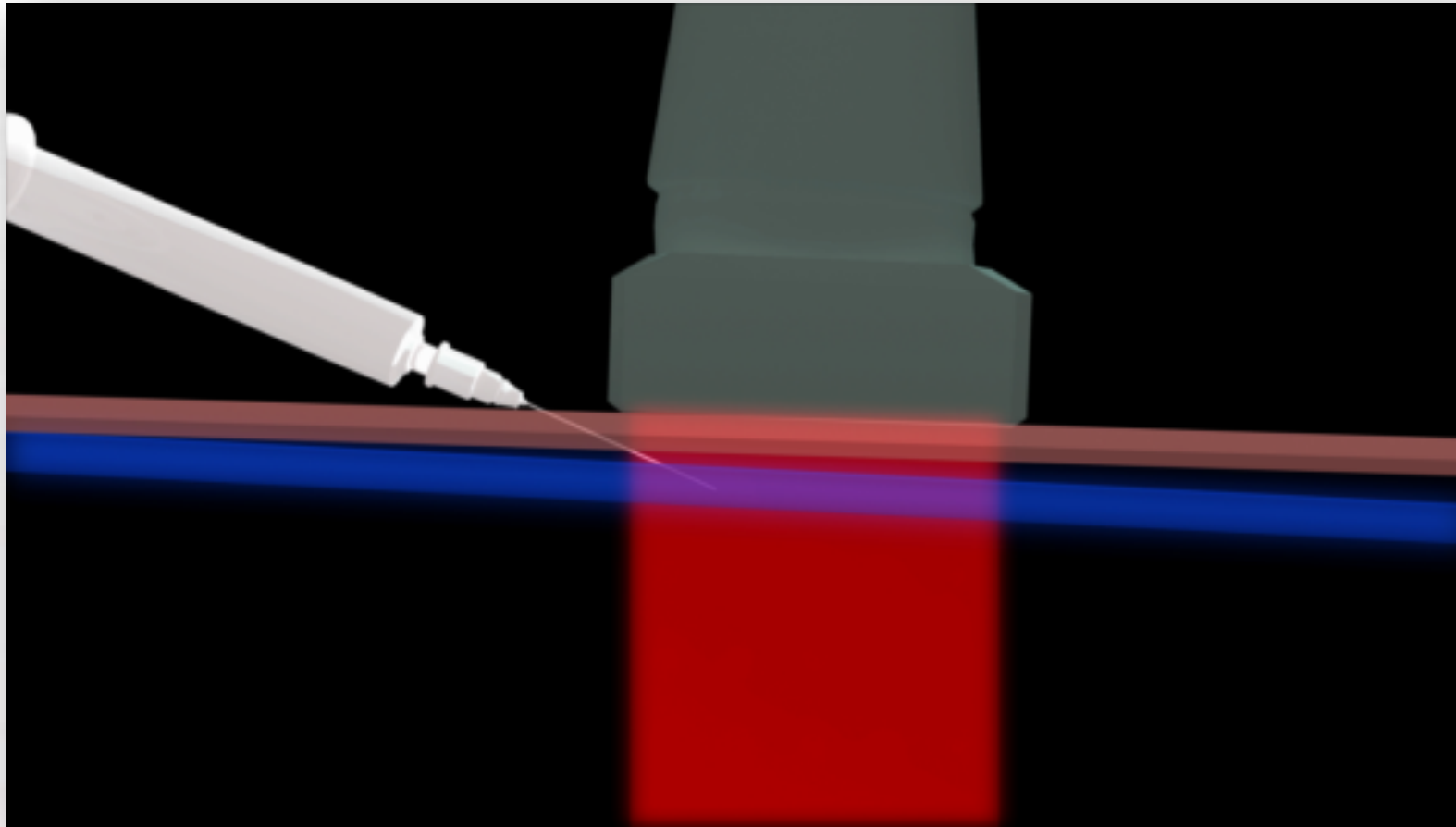
TECHNIQUES FOR ULTRA SOUND FOAM SCLEROTHERAPY



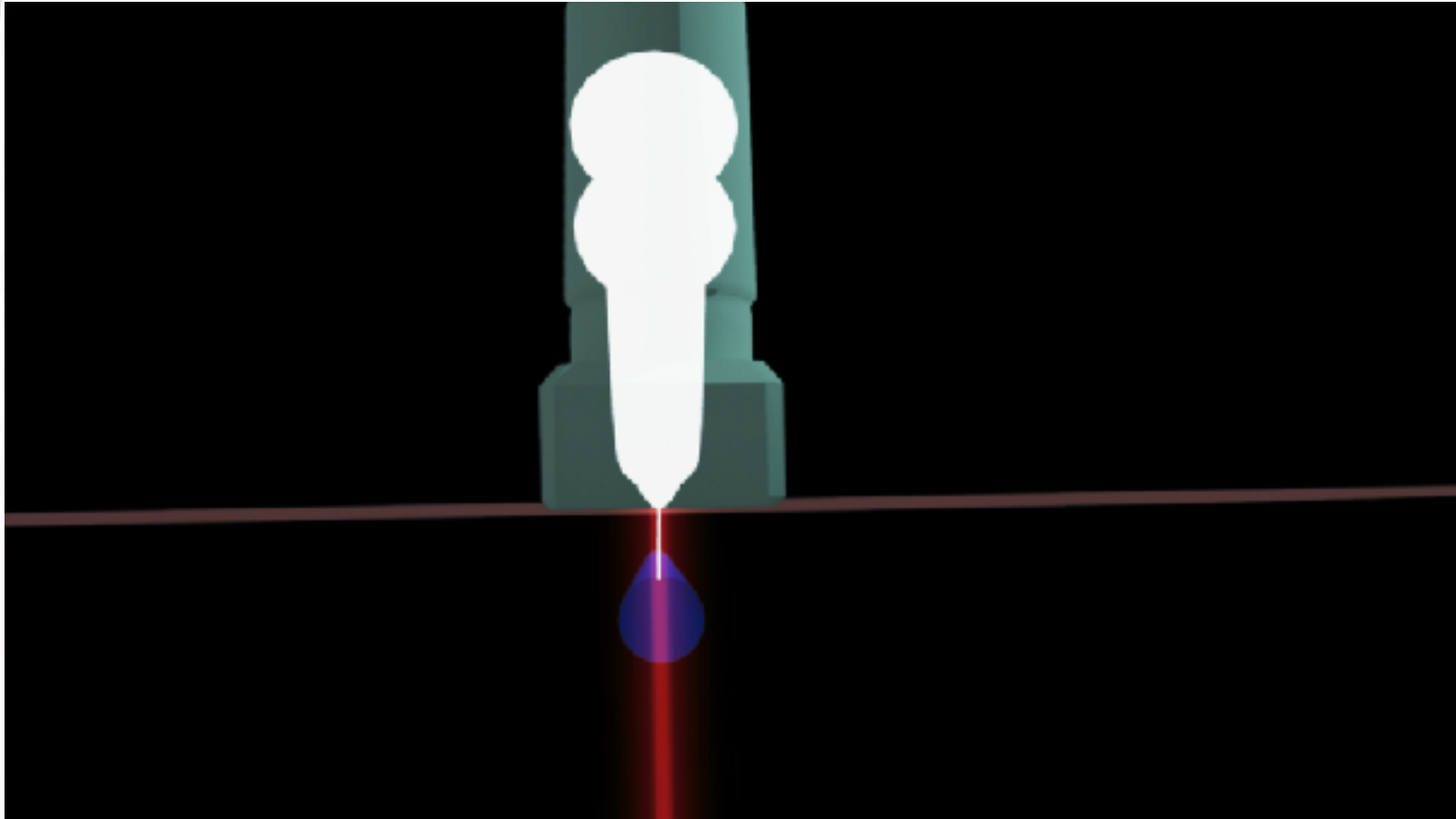
Longitudinal view



Longitudinal view



Longitudinal view



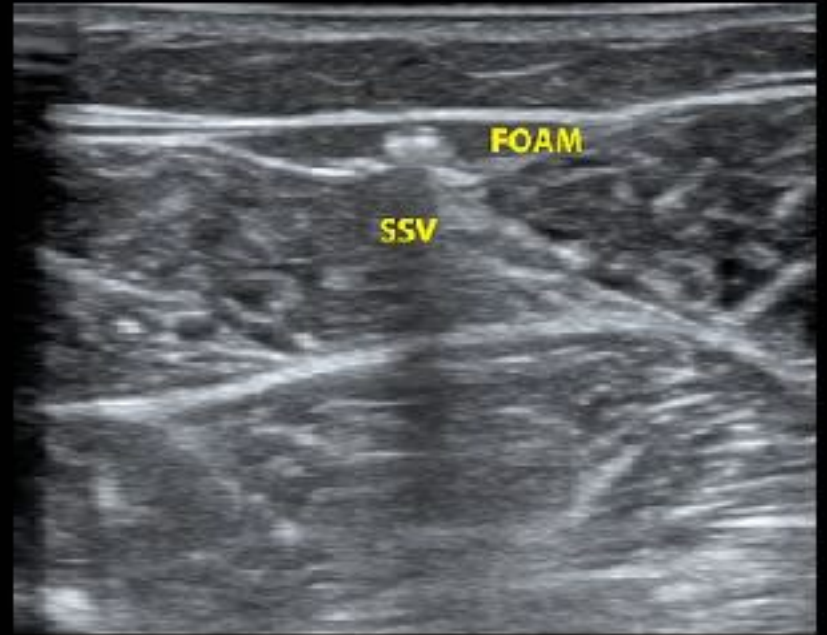
TRANSVERSE VIEW (CROSS SECTION)



Dr Hamel-Desnos
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6.0% M10.5 I15 0.1

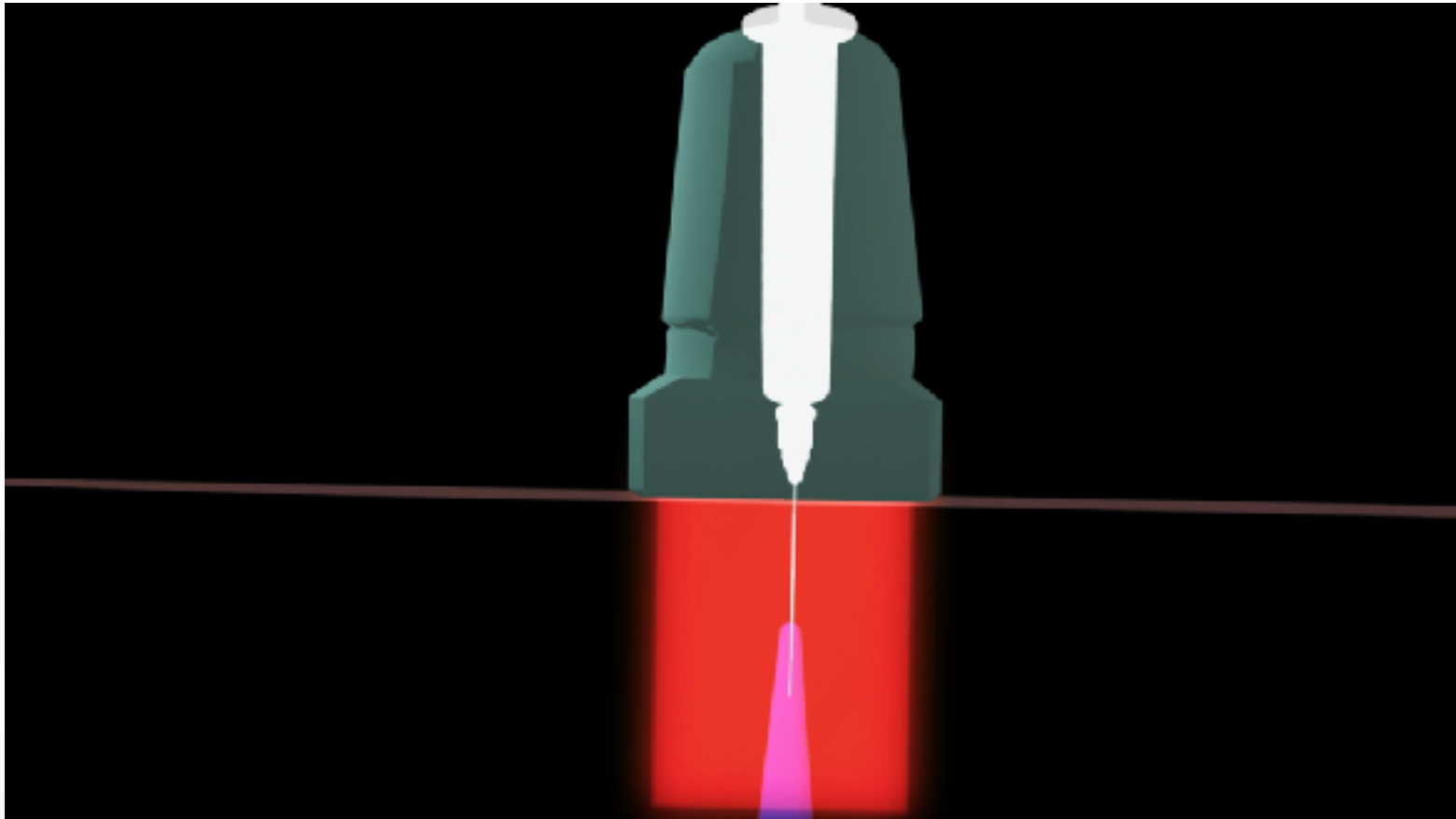
III



mes-varices

claudine@

TRANSVERSE VIEW (CROSS SECTION)





USE PHANTOM FOR TRAINING !

Tips and tricks :

Use the dominant hand to hold the syringe

Use the other hand to hold the probe

Tips and tricks :

To be easily visible :

- use 22 gauge needles
- use long needles : up to 40 mm

Concentrations for Foam Sclerotherapy

(European Guidelines – Rabe E. et al. Phlebology 2013)

Concentration of the sclerosant in foam sclerotherapy.

Recommendation 25: We recommend choosing the following concentration in relation to the **diameter** of the venous segment to be treated. Concentrations and volumes proposed are just indicative and may be changed according to the judgement of the therapist (Table 4).



Concentrations for Foam Sclerotherapy

(European Guidelines – Rabe E. et al. Phlebology 2013)

Table 4. Suggested POL and STS concentrations in foam sclerotherapy^{4,7,10,12,14,16–22,24–26,30–37,39,47,51,129,130}

Indications	Concentration percentage of POL	Concentration percentage of STS
Telangiectasias	Up to 0.5 (GRADE 1B)	Up to 0.25 (GRADE 2C)
Reticular varicose veins	Up to 0.5 (GRADE 2C)	Up to 0.5 (GRADE 2C)
Tributary varicose veins	Up to 2 (GRADE 1B)	Up to 1 (GRADE 1C)
Saphenous veins (mm)		
<4	Up to 1 (GRADE 1B)	Up to 1 (GRADE 1C)
≥4 and ≤8	1–3 (GRADE 1A)	1–3 (GRADE 1B)
>8	3 (GRADE 1A)	3 (GRADE 1B)
Incompetent perforating veins	1–3 (GRADE 2B)	1–3 (GRADE 2B)
Recurrent varicose veins	1–3 (GRADE 2B)	1–3 (GRADE 2B)
Venous malformation	1–3 (GRADE 2B)	1–3 (GRADE 2B)

POL, polidocanol; STS, sodium tetradecyl sulphate.





Volumes to inject ?

(European Guidelines – Rabe E. et al. Phlebology 2013)

Recommendation 24: We recommend a maximum of 10 mL of foam per session in routine cases

Tips and tricks :

Good venous spasm and a homogenous distribution

Inject small volume : not more than 5 ml / syringe

After the procedure ?

Recommendation 30: We do not recommend for mandatory **elevation of the leg or compression of the junction** for safety reasons during or after treatment (GRADE 2C).

After sclerotherapy, **medical compression may be applied to the treated extremity.** Compression can be performed using either a medical compression stockings or compression bandages (GRADE 2C);

Indications for venoactive drugs :

Haemodynamics changes in the lower limb venous disease : The UIP Consensus; International Angiology, june 2016

improved quality of life.^{29, 76} In the most recent guidelines for management of chronic venous disorders of the lower limbs, VADs were assigned grades of recommendation according to the strength of the clinical file: one agent (MPFF) received a Grade 1A level of evidence for its effects on venous symptoms, then calcium dobesilate was graded 2A, eschin extracts and HCSE 2B.²⁹ VADs have also proven effective against lower limb edema with variable impact.⁴⁰

In patients with CVI, VADs may be used in conjunction with open surgery, endovenous procedures including stenting, saphenous thermal or chemical ablation, compression therapy or a combination thereof.⁷⁷

Biarritz, Povo Basco



Obrigado pela vossa atenção !