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CONTROVERSIES & UPDATES
IN VASCULAR SURGERY

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Reversibility test of the SV reflux: how to carry it and why ?

**P. Pittaluga, S.
Chastanet**

DISCLOSURE OF INTEREST

**I do not have any relevant
financial relationships
with any commercial interest**



How to carry on the reversibility test ?





Why doing the reversibility test ?

The ASVAL method is based on the ascending evolution concept of the varicose disease



**Varices are the
cause of the
hemodynamic
trouble**

Predictive test for the reversibility of the reflux ?

Predictive Value of a Preoperative Test for the Reversibility of the Reflux After Phlebectomy with Preservation of the Great Saphenous Vein

P. Pittaluga, S. Chastanet. Riviera Veine Institut, Monte Carlo, Monaco

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✓ Prospective study:

- Successive inclusion of all patients operated on by ASVAL with a GSV reflux .

✓ Reversibility test (RT) systematically performed in preop :



✓ Data:

- USDS preop, 1 yr, 2 yrs
- Symptoms evaluation (Venous Disability Score)
- Cosmetic evaluation

	n	%
Patients	249	
Limbs	293	
Mean age (yrs)	52.7 (20-83)	
Female	185	74.3%
C0-C1	0	0%
C2	251	85.7%
C3	15	5.1%
C4-C6	27	9.2%
Symptomatic	193	65.9 %
SFJ mean diameter (mm)	7.1	3-14
GSV reflux	293	100 %
Positivity of the reverbility test	165	56.3 %

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Positivity of the RT correlated with preop CVI stage

Pre-op	Test -	Test +	P
Female	62.8 %	83.8 %	0.03
CEAP C3-C6	27.3 %	4.2 %	0.01
Symptomatic	78.9 %	55.8 %	0.01
SFJ mean diameter (mm)	7.9	6.4	0.01
SFJ reflux (term and/or preterm)	94.5 %	75.8 %	0.01

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Persistence of the SV reflux correlated with the RT

SV persistence	Test -	Test +	p
1 yr	11.2 %	4.5 %	0.04
2 yrs	14.3 %	5.3 %	0,03

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	Sensibility	Specificity	PPV	NPV
1 an	60 %	50 %	73 %	36 %
2 ans	70 %	56 %	95 %	14 %

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2 ans	70 %	56 %	95 %	14 %

Symptoms improvement

Absence of improvement	Test -	Test +	p
1 yr	15.5 %	12.9 %	0.5
2 yrs	20.6 %	13.6 %	0.2

No difference

Symptoms improvement

Absence of improvement	Test -	Test +	p
1 yr	15.5 %	12.9 %	0.5
2 yrs	20.6 %	13.6 %	0.2

No difference

Cosmetic improvement

Absence d'amélioration	Test -	Test +	p
1 an	9.1 %	5.8 %	0.3
2 ans	11.1 %	6.8%	0.3

No difference

Value of the Reversibility Test

- Fair sensitivity and excellent PPV (95%)
 - ✓ When the RT is positive => reliable for the postop abolition of the reflux
 - ➔ RT+ => major criteria for the choice of SV preservation +++
- Poor specificity and NPV
 - ✓ Difficulty or impossibility to realize the RT in presence of multiple varicose tributaries +++
 - ✓ Abolition of the SV reflux possible after the treatment of all varicose tributaries
 - ➔ RT - => Not enough to choose the SV ablation

Value of the Reversibility Test

- RT not correlated to the clinical outcomes
 - ✓ RT based on hemodynamics
 - ✓ The functional and cosmetic evaluation is subjective

- Good clinical outcomes even in case of RT - : could be explained by the treatment of the varicose reservoir
 - ✓ Varicose reservoir ablation: decrease of the saphenous reflux (*Eur J Vasc Endovasc Surg* 2010; 40, 122-128)
 - ✓ Decrease of reflux volume: symptoms improvement (*JVS* 2009; 50:107-118)
 - ✓ Ablation of varicose tributaries: cosmetic improvement (*JVS* 2009; 50:107-118)

The preop positivity of the RT is correlated to the hemodynamic improvement after ASVAL with a good positive predictive value.

Therefore a preop positivity of the RT should lead to the preservation of the SV according to the ASVAL principles.

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Therefore a preop positivity of the RT should lead to the preservation of the SV according to the ASVAL principles.

However the preop negativity of the RT doesn't mean he systematic SV ablation since good hemodynamic and clinical results have been observed after ASVAL despite a preop negative RT.

Other criteria such as SV diameter, extension of reflux, nb of varicose tributaries, presence of skin changes should be taken into account.

**Thank you for
your attention**

