



CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE
CONTROVERSIES & UPDATES IN VASCULAR SURGERY

FEBRUARY 7-9, 2019

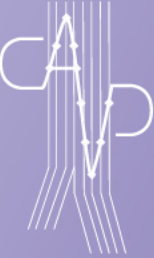


MARRIOTT RIVE GAUCHE & CONFERENCE CENTER, **PARIS, FRANCE**

PELVIC EMBOLISATION AND TREATMENT OF LOWER LIMB
VARICES FROM PELVIS

Pelvic embolisation must be done first

HARTUNG Olivier, MD, MSc



Disclosure

Speaker name: HARTUNG Olivier

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- ☐ I have the following potential conflicts of interest to report:
- ☐ Consulting : Boston Scientific, Medtronic



Pelvic venous insufficiency (PVI)

- 10% of women
- 3 mechanisms (Greiner)
 - Type 1: pathology of the venous wall
 - Type 2: due to obstructive disease
 - Type 3: local cause (endometriosis, tumor mass...)





TABLE 160.3 Results of Embolization for Pelvic Congestion Syndrome

Series	N	Veins	Technique	Follow-Up (Months)	RESULTS (%)	
					Improved	Worsened
Capasso et al. ¹¹⁷	19	OV	Embucrilate and/or coils	15.4	74	
Tarazov et al. ¹¹⁸	6	OV	Coils	24	100	
Machan et al. ¹¹⁹	23	OV	Coils	15	78	
Cordts et al. ¹²⁰	9	OV	Coils +gelatin	13.4	100	
Cotroneo et al. ¹²¹	22	OV	Coils	3	60	
Richardson et al. ¹²²	28	OV	Coils + foam	22.2	SS	
Maleux et al. ¹²³	41	OV	Embucrilate + coils	19.9	68.2	
Sculdetus et al. ¹²⁴	7	OV	Coils	27	43	
	6	IIVT	Coils		83	
	12	IIVT + OVR	Coils + OVR		83.4	
Bachar et al. ¹²⁵	6	OV	Coils	7.7	83	
Pieri et al. ¹²⁶	33	OV	3% STS	9	61	
Chung et al. ¹⁰⁹	52	OV	Coils	26.6	SS	
Kim et al. ¹⁰⁸	127	OV	Gelfoam + sodium morrhuate + coils	45	83	4
Lasry et al. ¹²⁷	30	OV ± IIVT	Coils	6	90	
Kwon et al. ¹²⁸	67	OV	Coils	40	82	
Creton et al. ¹⁰⁷	24	OV ± IIVT	Coils	36	76	
Gandini et al. ¹²⁹	38	OV	3% STS foam	12	100	0
Asciutto et al. ¹¹⁴	35	OV and/or IIVT	Coils	45	Embolisation >>>	
Laborda et al. ¹³⁰	202	OV ± IIVT	Coils	89% at 60	93	
Nasser et al. ¹³¹	113	OV ± IIVT	Coils	12	100	0
Hocquelet et al. ¹³²	33	OV ± IIVT	Coils + foam	23	93	0
Monedero ¹⁰⁷	215	OV and/or IIVT	Coils + foam	6M	90	
Ratnam ¹³³	218	OV and/or IIVT	Coils + foam	0.9M	95	
Hartung ⁹⁷	78	OV +/– IIVT	Coils + foam	4	91	0

IIVT, Internal iliac vein tributaries; OV, ovarian vein; OVR, ovarian vein resection; SS, statistically improved; STS, sodium tetradecyl sulfate.

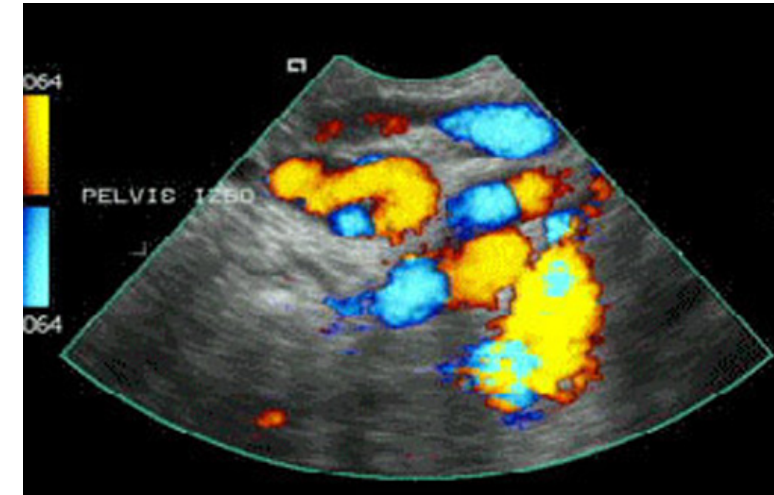
Pelvic venous insufficiency

- Can cause lower limb varicose veins
 - Atypical VV
 - **Jiang** : 1,3% of primary VV
 - **Garcia-Gimeno** :
 - 48% of GSV reflux
 - 26% of AAGSV
 - Recurrent VV :
 - **REVAS** : 16.6%
 - **Jiang** : 6.3%



Material and methods Hartung Phlebology 2015

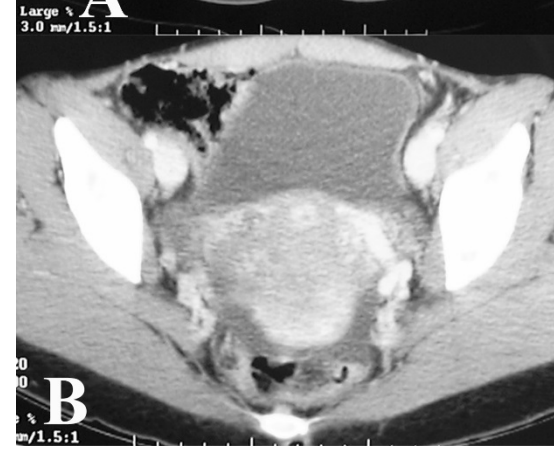
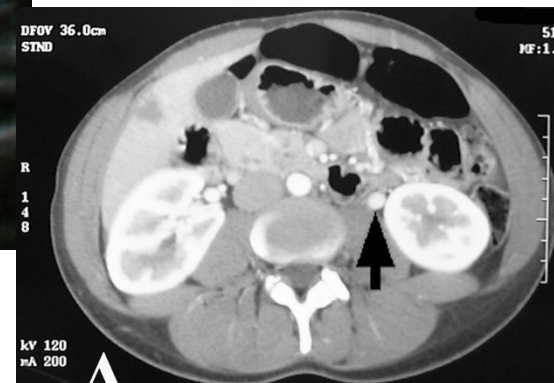
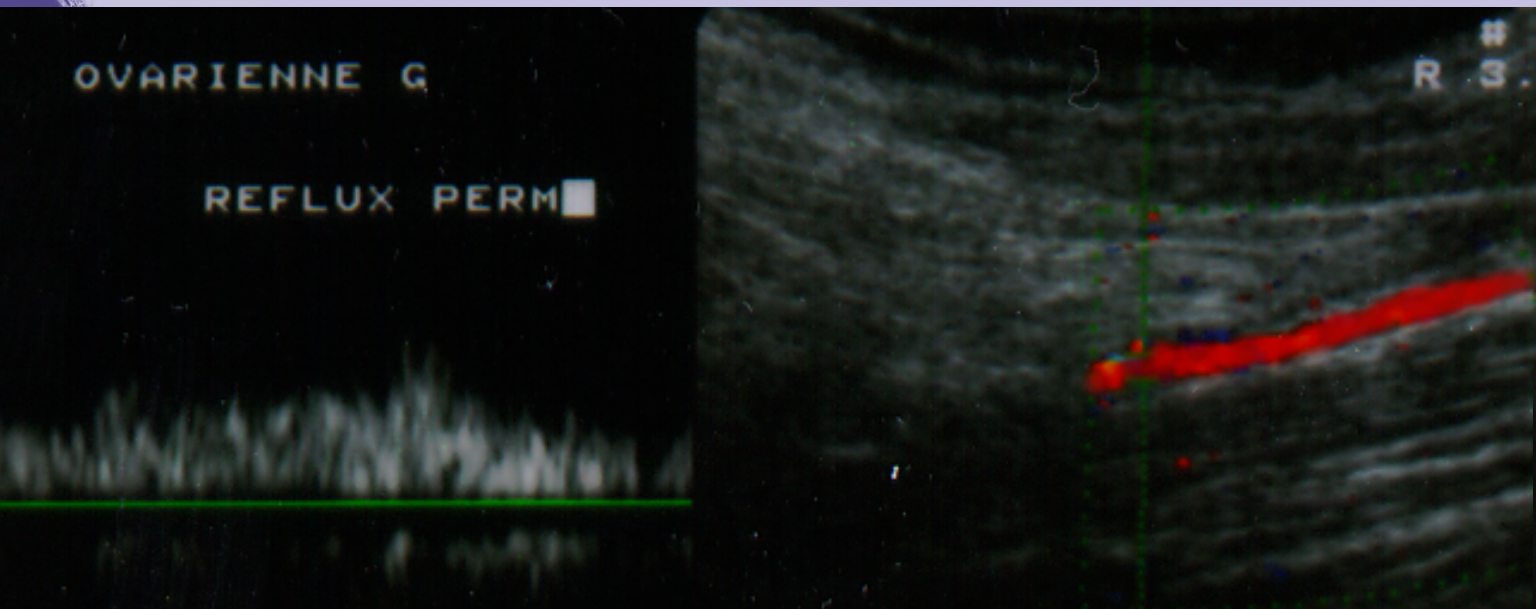
- Iliocavography and pelvic vein phlebography for PVI from Sept 2013 to Aug 2014
- Preoperative workup
 - Clinical examination
 - Duplex scan + CTV or MRV
 - OV (> 6mm) and IIV
 - Pelvic, perineal and lower limbs VV
 - Obstructive lesions
 - Pelvic disease, anatomic variations





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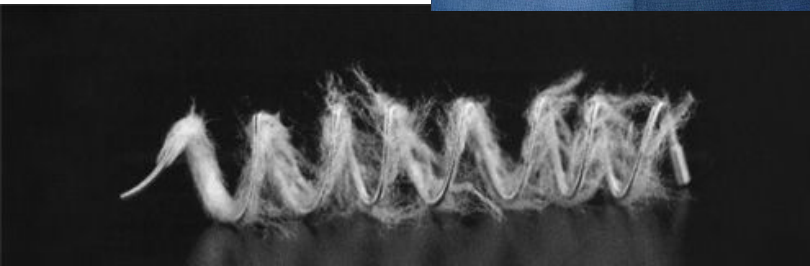
Technique

- Left CFV or FV access under LA
- Iliocavography
- Pelvic phlebography
 - Left renal vein and left gonadic vein
 - NCS suspected => reno-caval pullback gradient
 - Right gonadic vein if >4mm on CTV/MRV
 - Bilateral internal iliac vein



Reflux without obstruction

- => Embolization
 - Coils + foam
 - Amplatzer
- Laparoscopic resection



Obstructive lesions

- Iliac vein => stenting
- NCS => surgery



NECULA, CRISTINA

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* 23/10/1984

Study 1

21/11/2014

08:13:59

1 IMA 30 FRM 1

Hôpital Nord - MARSEILLE
ARCADIS



Soustraction en radioscopie
Ortho/Trauma/All body region/Standard
SINGLE PLANE

W: 1938
C: 3003



NECULA, CRISTINA

ID: 14.11.21-07:53:58-STD-1.3.12.2.1107.5.12.9.32452

* 23/10/1984

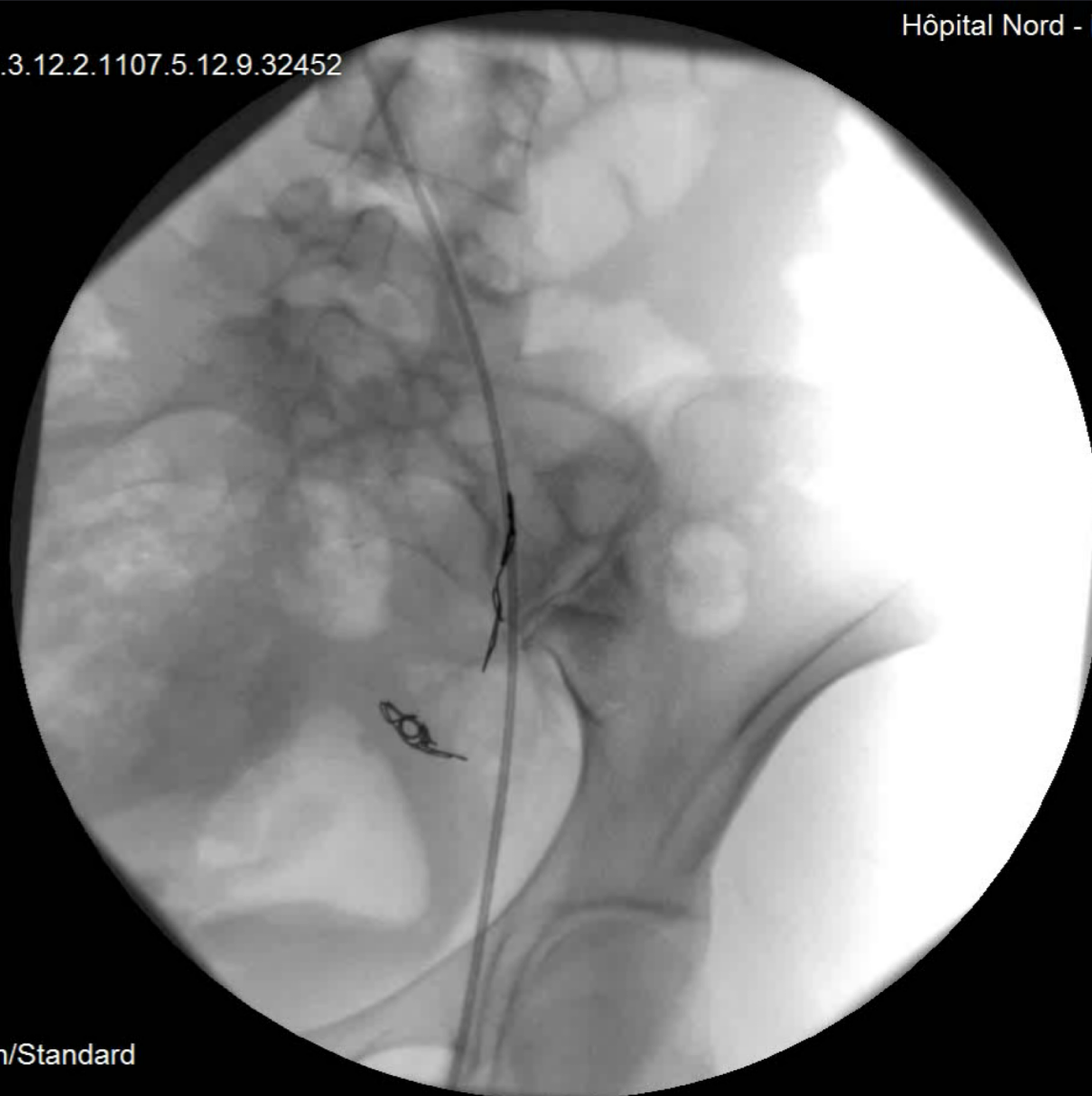
Study 1

21/11/2014

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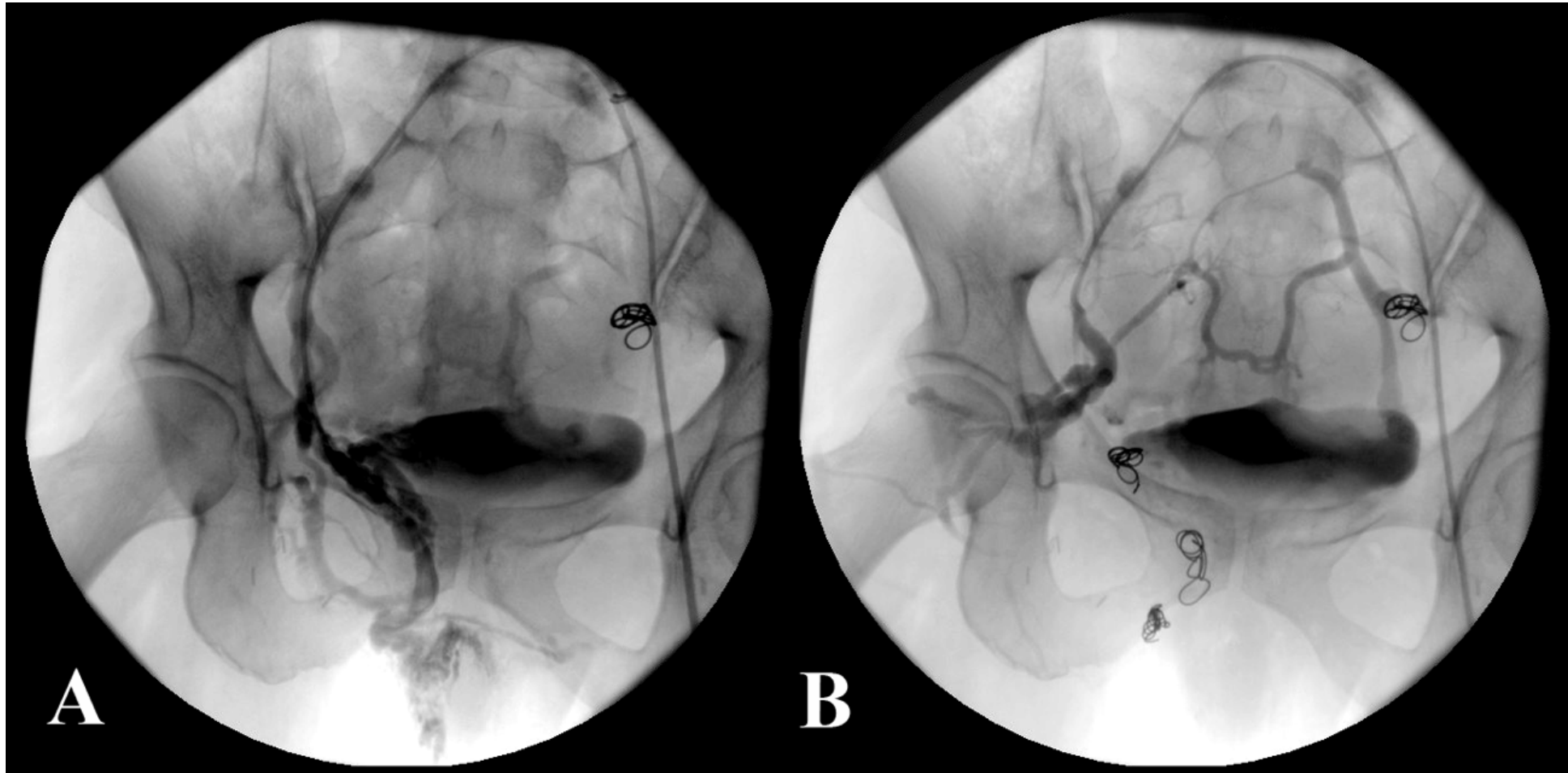
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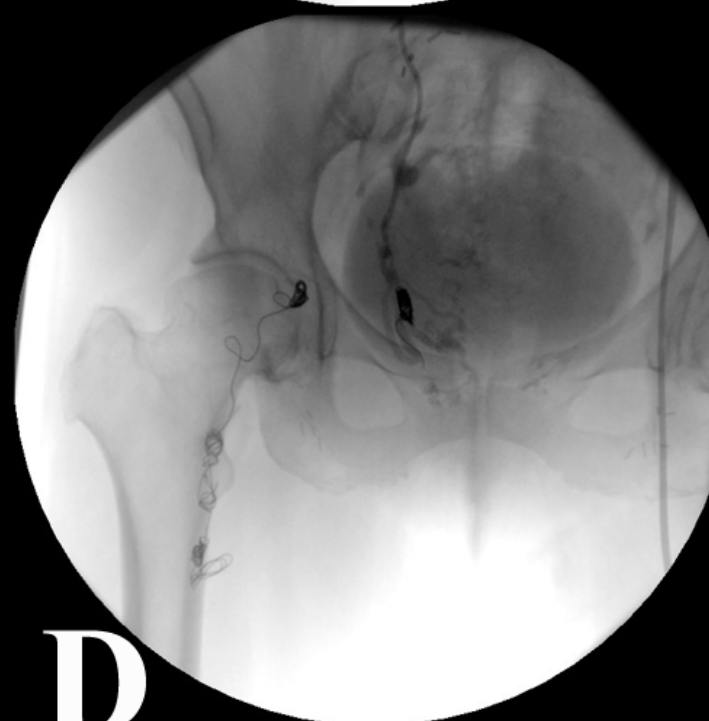
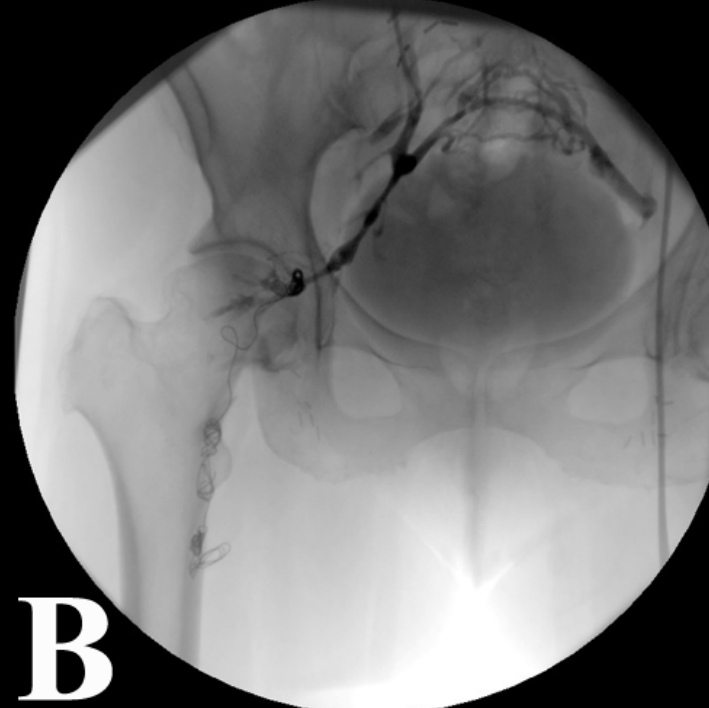
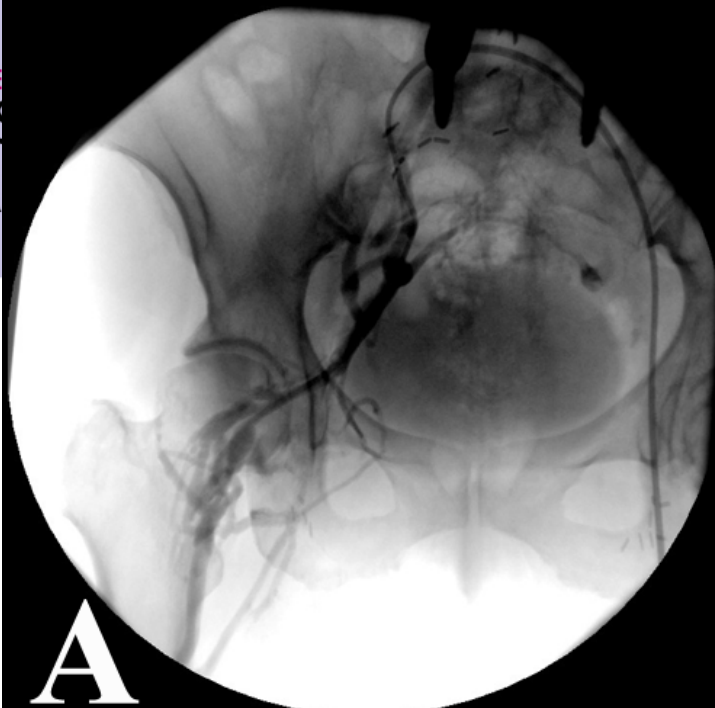
Hôpital Nord - MARSEILLE
ARCADIS



Soustraction en radioscopie
Ortho/Trauma/All body region/Standard
SINGLE PLANE

W: 3255
C: 2049







Results

- 119 women, median age 39 years (17-74)
- Symptoms
 - 86 PCS
 - 102 chronic venous insufficiency
 - 69 (58%) had both conditions



	Pelvic vein reflux	ICOL or NCS
N	78	41
Age	41 (24-57)	36 (17-74)
Nulliparous	0	8 (19%)
Median N of pregnancies	3 (1-10)	2 (0-8)
PCS	60 (77%)	26 (63%)
C		
-C0	14 (18%)	3 (7%)
-C1	3 (4%)	2 (5%)
-C2	54 (70%)	21 (51%)
-C3	5 (6%)	14 (34%)
-C4	1 (1%)	1 (3%)
-C5	0	0
-C6	1 (1%)	0
Recurrent varicose vein	32 (41%)	6 (14%)
Venous claudication	0	12 (29%)
Lesion		
Isolated reflux	78 (100%)	0
ICOL	0	29 (7 with LOV reflux)
NCS	0	4 (3 with LOV reflux)
ICOL + NCS	0	8 (8 with LOV reflux)

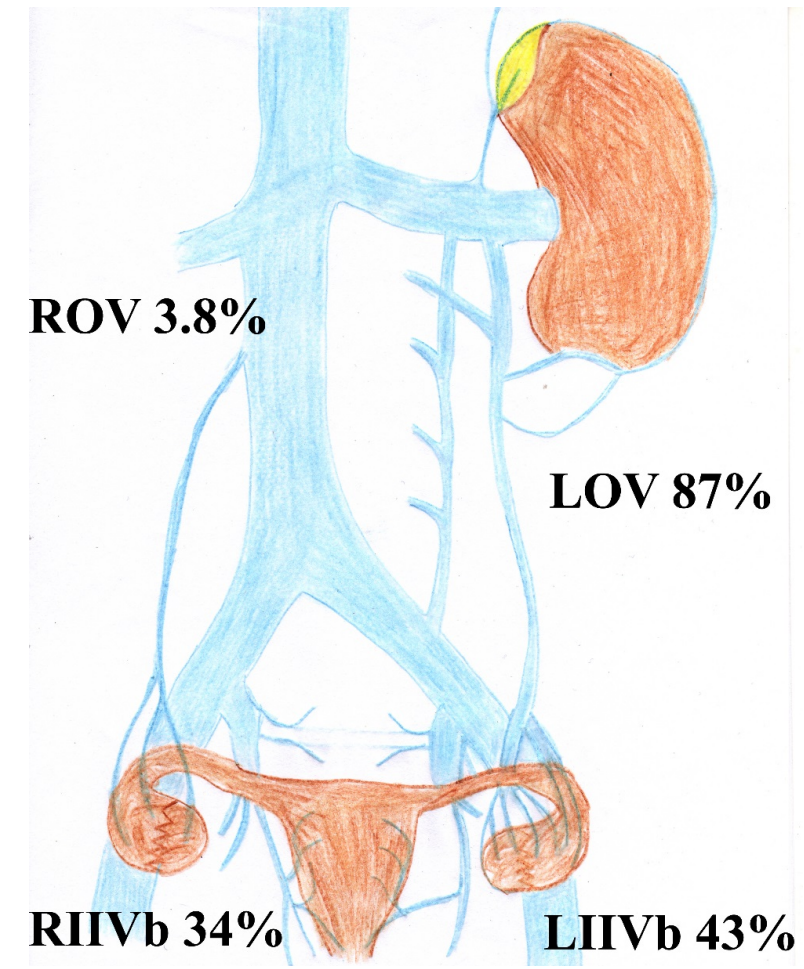


- Median follow-up 4 months (1-12)
- 12 NCS
 - 5 operated + LOV embolization
 - 7 treatment of the associated ICOL by stenting
- 29 ICOL without NCS
 - 28 stenting (10 recanalization) +/-LOV embolization
 - 1 recanalization failed => Palma procedure
 - PP/ SP 97% at 12 months



Results

- Embolization
 - 132 veins
 - Foam + coils
 - + Amplatzer 2 cases
 - Without foam 1 case





Results

Hartung Phlebology 2015

- Pelvic vein reflux
 - PCS improved in 55 (91%) including 36 (60%) asymptomatic
 - Varicose veins improvement 31 patients (51%)
 - decrease of symptoms or of the volume and extent of the varicose veins.
 - Additional treatment needed in 50 patients (82%)
 - planned surgical treatment changed for foam in 8 cases.



Creton **EJVES 2007**

- 24 W with non-saphenous perineal varicose veins and PCS
 - Embolization
 - **At 3 years :**
 - **10 no varicose veins**
 - **7 good result**
 - **3 less varices**
 - **2 not improved**
 - **Improvement of the global symptoms score 76%**



Greiner Vascular 2007

- 24 W with II vv recurrence and PVI
 - Embolization on 74 incompetent pelvic veins
 - Iterative surgical procedure on lower limbs
 - At 4 years
 - Pelvic veins : no incompetence 77%, improved in 23%
 - **Lower limbs :**
 - no improvement of C1 lesions
 - no more C2 lesions in 22 patients (91%)



Scrotherapy of LL VV can be done regardless pelvic embolization



But you should not



Why?

- Does not improve symptoms in PCS patients
- Previous embolization can reduce LL VV
- Higher risk of recurrence



Conclusion

- PVI can cause PCS but also LL VV
- Obstruction must be recognized and treated if indicated
- Embolization should be performed first in type 1 patients
 - Safe and efficient
 - Improve pelvic symptoms in patients with PCS +++
 - Improve lower limb VV => can change treatment from phlebectomies to sclerotherapy
 - Reduce the risk of recurrence