Pelvic venous insufficiency
my best practice, warning and complications prevention

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Pelvic venous insufficiency

- All manifestations due to pelvic venous system dysfunction
  - Mainly pelvic varicose veins
  - Can cause
    - Pelvic congestion syndrome
    - Lower limb varicose veins
  - Underdiagnosed and undertreated
3 mechanisms of pelvic VV 
(Greiner)

- Type 1: reflux secondary to pelvic vein incompetence

- Type 2: obstructive lesions of venous outflow

- Type 3: secondary to a local extra venous phenomenon (endometriosis...)
In which patients?

- Mainly premenopausal multiparous women
  - Chronic pelvic pain without gynecologic cause
  - Lower limb varicose veins
    - Recurrence after GSV treatment
    - Atypical varicose veins
    - Vulvar and/or inguinal varicose veins
    - +/- PCS
Strategy : Diagnosis

- Pelvic varicose veins: duplex-scan +++
  - Presence of multiple dilated tubular structures into the pelvis with a venous blood Doppler signal and a diameter > 5 mm
Strategy : Diagnosis

2 different contexts:

- Isolated PCS => other causes?
  - Gynecologic examination
  - Pelvic echography, CT, MRI

- Lower limb varicose veins due to PVI => TRT
Strategy: Diagnosis

- Identification of pathologic veins
  - DS, CTV, MRV
  - Anatomic variations
Strategy: Diagnosis

- Identification of pathologic veins
  - DS, CTV, MRV
    - Anatomic variations
  - Selective phlebography
    - Brachial or femoral approach
    - Local anesthesia without urinary drainage
    - Both OV and both IIV + Iliocavography and LRV
Strategy: Diagnosis

- Exclude obstructive lesions
  - DS, CTV, MRV, phlebography, IVUS
  - Iliocaval (MTS +++) => stenting
  - Nutcracker syndrome => TRT if very disabled
    - Contraindication to isolated LOV embolization
Strategy : Treatment

- Embolization
  - During or secondary to diagnostic phlebography
  - Methods :
    - Coils + foam
**Strategy : Treatment**

- **Embolization**
  - During or secondary to diagnostic phlebography
  - Methods:
    - Coils + foam
    - Amplatzer
    - Glue
Right ovarian vein
Right ovarian vein
Left ovarian vein
Left ovarian vein
Left ovarian vein
Left internal iliac vein
Left internal iliac vein
Strategy : Treatment

- Embolization
  - Local anesthesia
  - Poorly invasive
  - Ambulatory
  - Do not preclude from future pregnancies
Strategy: Treatment

- **Other TRT**
  - Medical TRT: can improve symptoms but none resolved symptoms and PVI
  - Surgical TRT:
    - ovarian or internal iliac vein ligation
    - ovariectomy
    - total hysterectomy with bilateral salpingo-ovariectomy
Results

- **Leal Monedero**: 1186 embolizations
  - Coils + foam 95.6% improvement vs coils 76% at 6M and less coils

- **Greiner**: 24 p, 74 embolized veins with glue and coils
  - Good clinical results without reflux recurrence on the treated veins
<table>
<thead>
<tr>
<th>Series</th>
<th>N</th>
<th>Veins</th>
<th>Technique</th>
<th>FU</th>
<th>Results (%)</th>
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<td>Capasso</td>
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Complications

- Rare
  - Dye extravasation => No foam
Complications

- Rare
  - Dye extravasation => No foam
  - Coils or glue embolization
Coils embolization

- Leal Monedero: 1186 embolizations
- Coils + foam: > results and less coils
- Less cephalic
Coil migration

- During the procedure
- Recapture or stock
Coil migration

- During the procedure
  - Recapture or stock
- Late embolization
Complications

- Rare
  - Dye extravasation => no foam
  - Coils or glue embolization
  - Foam
  - Hematoma at access site
  - DVT/PE: early walking, heparin?
  - Transient arrhythmia
Iliocaval obstructive lesions
Iliocaval obstructive lesions
Iliocaval obstructive lesions
Nutcracker syndrome
Conclusion

- Disabling pathology
- Endovascular treatment for reflux: poorly invasive, sure, efficient and well tolerated
- Obstruction must be recognized and treated if indicated
- Quality of results relies on experience
  - Patients selection
  - Technique