PCS case presentation & discussion

Romaric Loffroy, MD, PhD

Professor of Radiology
Chief, Vascular & Interventional Radiology Department
François-Mitterrand Teaching Hospital
Dijon, France
Disclosure

Speaker name:
Romaric Loffroy

I have the following potential conflicts of interest to report:

☑ Consulting (Medtronic, Gore, GEM, Guerbet)
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☐ I do not have any potential conflict of interest
Case #1

• 26-year-old woman
• 4 previous pregnancies
• Chronic pelvic pain > 1 year
• Dyspareunia
• Bilateral lower limb varices:
  – Right: GSV incontinence
  – Left: atypical perineal varices
• Doppler US: bilateral pelvic varices

Which other imaging modality?
My preference: angio-CT

- Renal vein opacification
- Left renal venous return abnormality
- Location, pathway and diameter of the ovarian veins
- Pelvic varices (periuterine, perineal, thigh)
- No hemodynamic study
What is next step?

- Retrograde selective venography +++
  - Left renal vein study
  - Ovarian veins study
  - Internal iliac veins and afferents study
    - Inferior gluteal vein
    - Uterine vein
    - Internal pudendal vein
    - Obturator vein
  - Left ilio-caval return study

Femoral approach/5Fr Cobra catheter/Valsalva
Which embolic agent?
Everything works...

- Coils ++
- Foam sclerosants +
  - Polidocanol 2% (+ air + contrast)
  - STS 3%
- Cyanoacrylate glue +
  - Glubran®2
  - Expertise ++
- Onyx® ?
  - Painfull
- Plugs
  - Oversizing
- Combination +++
Combination: Concerto coils + Glubran2
Right IIV afferents checking
Final control
Principles of treatment

• Complete and definitive occlusion
  - Pelvic leakage sites
  - Pelvic venous hyperpressure

• Before treatment of lower limb varices
• Outpatient procedure
• Femoral approach
• Four vessels study
• Pain control
• Embolic materials alone or in combination
Conclusion: pelvic leakage sites?

- Up to 20% of patients with lower limb varices partly or completely of pelvic origin
- Looking for pelvic leakage sites +++

- Inferior gluteal vein
- Uterine vein
- Internal pudendal vein
- Obturator vein
Cas#2

- 46-year-old woman
- Chronic pelvic pain > 3 years
- Dyspareunia
- CT scan:
  - Suspected ANCS
  - Left pelvic varices
No reno-caval pressure gradient (< 3mm Hg)

How do you manage anastomoses?
Play with Valsalva for gluing!
Coiling is preferable here
Conclusion: nutcracker syndrome?

- Real disease?
  - Majority of suspected “ANCS” on daily CT scans are not
  - More “NC anatomy” than “NC syndrome”!
- Reno-caval pressure gradient?
  - Which evidence from the literature?
- What choice in case of true nutcracker syndrome?
  - Surgery: transposition?
  - Embolization alone?
  - Renal stenting alone?
  - Embolization and renal stenting?
Cas#3

- 38-year-old multiparous woman
- Chronic pelvic and perineal heaviness
- Vulvar varices
- Fullness of leg veins
- Bilateral periovarian varices on CT scan
Typical phlebography

- Huge dilation of the OV
- OV reflux
- Uterine vein engorgement
- Congestion of the OV plexus
- Filling of pelvic veins across midline
Which approach?
Combination: liquid + mechanical agent

Distal foam sclerotherapy under Valsalva to reach the right side

Then 4 Amplatzer vascular plugs
• But occlusion of left and right ovarian veins probably gives better results
• Systematic ?
Conclusion: aggressive embolization?

- Four vessels study
- Complete embolization on both sides
- Combination
  - Liquid agents
    - Preferentially glue
  - Mechanical agents
    - Preferentially coils
• Thank you...
PCS case presentation & discussion

Romaric Loffroy, MD, PhD

Professor of Radiology
Chief, Vascular & Interventional Radiology Department
François-Mitterrand Teaching Hospital
Dijon, France