Combined Reflux and Obstruction in Female PeVD:
What should I treat, and when?

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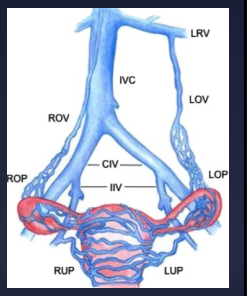
Disclosures

- Speaker's bureau/consulting: Cook Medical, Boston Scientific, Becton Dickinson, Medtronic, Penumbra, Tactile Medical, Philips
- Consulting: W.L. Gore, Asahi Intecc, Veryan, Cordis, Surmodics, Abbott, EnVVeno, Varian, Terumo

Pathophysiology

- Reflux
  - Ovarian vein
  - Internal iliac vein
- Obstructive
  - Left common iliac vein
  - Left renal vein ("Nutcracker")
- Compensated vs uncompensated depending on site of etiology

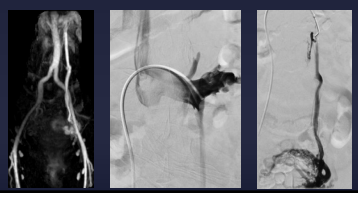


What has been the approach?

- Many practices favor stent placement first, agnostic of the presence of leg symptoms
  - Easier insurance approval in US
  - Quicker procedure
- Ovarian vein embolization has more data
  - Difficulty with approval in the US
  - Data are confounded/heterogeneous (differing methodologies, evaluation for obstruction, concomitant IIV embolization)

The devil is in the details, but we are short on data …

- Available data suggests that a significant number of PeVD patients have OV reflux and NIVL
- BUT…the data on optimum treatment approach is limited



Iliac vein stenosis is an underdiagnosed cause of pelvic venous insufficiency

Ratnam K. N. Santoshi, MD,[a] Sanjiv Lakhanpal, MD,[a,b] Vinay Satwah, DO,[a,b] Gaurav Lakhanpal, MD, Michael Malone, MD,[b] *and* Peter J. Pappas, MD,[a,b] *Greenbelt, Md*

- Retrospective review of 227 patients with pelvic symptoms
- Assessed for ovarian vein reflux and NIVL
- If both present, staged ovarian vein embolization followed by stent placement if necessary
- Outcomes primarily measured by VAS

Santoshi et al. JVS VL. 2017

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- 39 patients were treated with embo alone, 94 were treated in a staged fashion, 33 with simultaneous embo/stent, 50 with stent alone. 11 treated with OVE with plasty or plasty alone
- 80% had a NIVL
- In staged group, only 9 of 94 patients reported significant VAS decrease with embo alone
  - After staged stent placement, significant decrease in VAS (~8.6 → ~1.3)
  - After concomitant treatment, reduction of VAS to 2.4

Santoshi et al, JVS VL, 2017

The devil is in the details, but we are short on data …

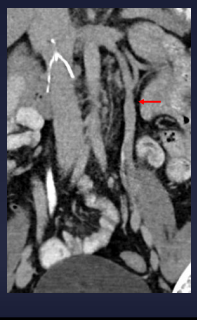
- Do we embolize first?
- Do we stent first?
- Do we do both in the same procedure?
- To ANSWER these questions ADEQUATELY:
  - Matched cohort trial where treatment paradigms are directly compared followed by staged secondary intervention
  - Rigorous outcome measures
- Ideally, we can find a way to have symptoms or non-invasive imaging direct which single intervention will have the greatest impact

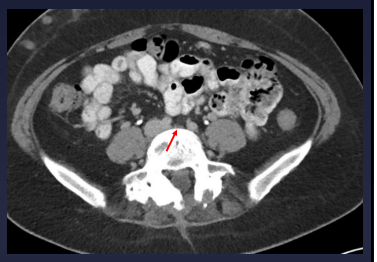
Let symptoms be your guide – How I do it when both OV reflux and a NIVL are present

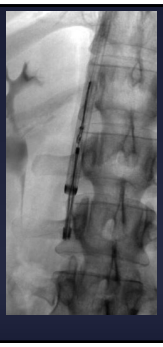
- Pelvic pain
  - Treat the ovarian reflux first
  - Reassess at 3-6 months, if symptoms persist, consider stent
- LE symptoms +/- pelvic pain
  - Discuss a staged approach with patient, but note higher likelihood of needing a stent
  - Not opposed to simultaneous treatment if leg symptoms are severe enough
  - Personally, not ready to abandon ovarian vein embolization in these patients

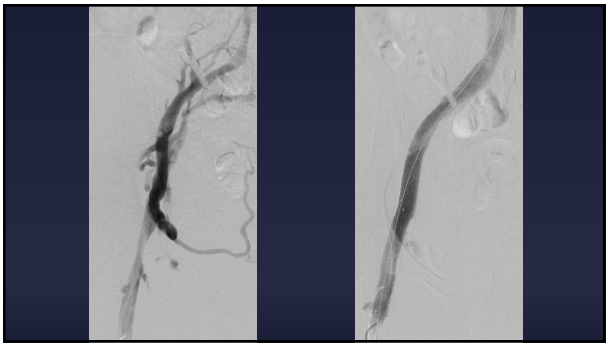
Case to illustrate

- 37-year-old female with multiple venous problems:
  - Embedded IVCF placed in 2006
  - Left lower extremity PTS since initial DVT in 2006 – severe LE edema, venous claudication, skin changes
  - Pelvic bulk symptoms, dyspareunia, symptoms are always present



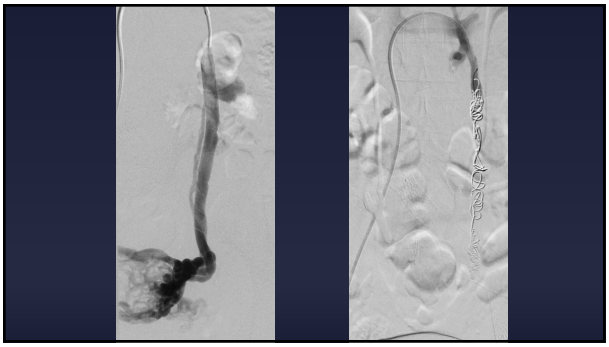






Post-intervention

- Significant improvement in LE PTS/stasis symptoms
- Improvement in pelvic symptoms as well
- …return of pelvic symptoms 1 year later, now worse



Post embolization

- Subtotal resolution of bulk symptoms and dyspareunia

Conclusion

- Female pelvic venous disease results from the complex interplay of interconnected venous systems, reservoirs, and the central perception of pain
- Optimum treatment protocol is unknown…data needed!
  - NIVLs in PeVD often coexist with ovarian reflux
  - Embo first? Stent first? Do both?
  - Counsel patients about possibility of doing both → FOCUS on symptoms
- Personal approach: If it looks multifactorial; do not "correct" everything at once! Do step-wise approach
  - For isolated pelvic pain, I prefer embo first rather than consigning a young woman to a stent outright