

Female Pelvic Venous Disease

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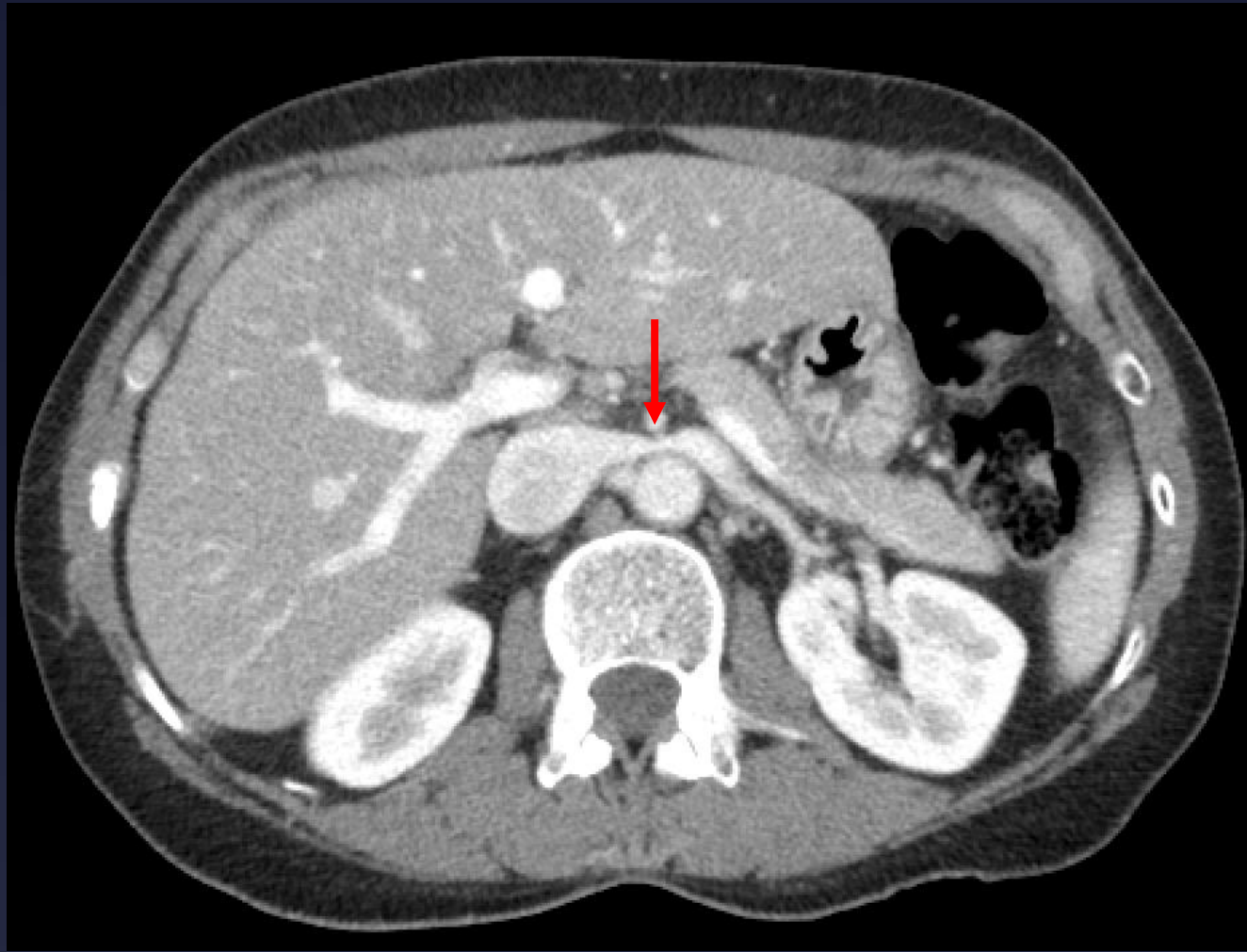
Chicago, IL

Case – Presentation

- 56-year-old female with 1-year history of constant left groin/pelvic pain
- Also has back pain aggravated by prolonged sitting or intense activity
- **Intermittent** left leg heaviness, no edema, no history of DVT
- Has been told she has “Nutcracker syndrome”

Case – Presentation

- No flank pain or hematuria
- No lower extremity/vulvar varicosities
- Exam unremarkable



- Axial post-contrast CT venogram of the abdomen demonstrates apparent narrowing of the left renal vein (red arrow) between the abdominal aorta and superior mesenteric artery



- Coronal reconstructions from abdominopelvic CTV demonstrates dense contrast column in left ovarian vein (red arrow) and pelvic venous plexus (yellow arrow), consistent with delayed emptying

Procedure - Catheterization

- 8 Fr sheath
- 7 Fr GON
- 5 Fr glide catheter



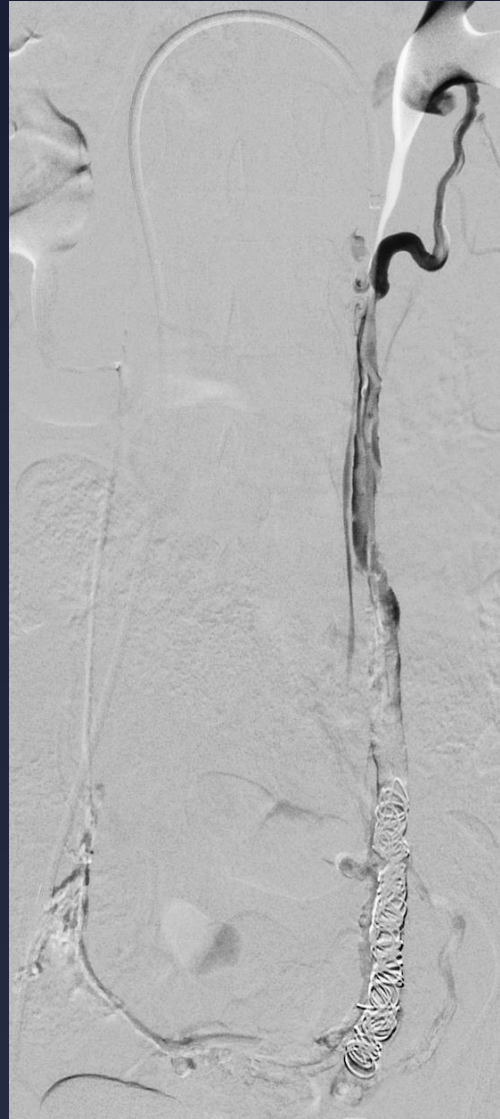
- Left renal venogram demonstrates hilar collaterals and dilated left ovarian vein with reflux. However, there is partial emptying of contrast into IVC



- Left ovarian venograms demonstrate venous dilation and reflux into the dilated pelvic venous plexus

Treatment

- 3% STS foamed with CO₂
- 12 mm coils



- Left ovarian venogram (left image) demonstrates occlusion and stasis of left ovarian vein.
- Left renal venogram demonstrates cessation of left ovarian reflux.

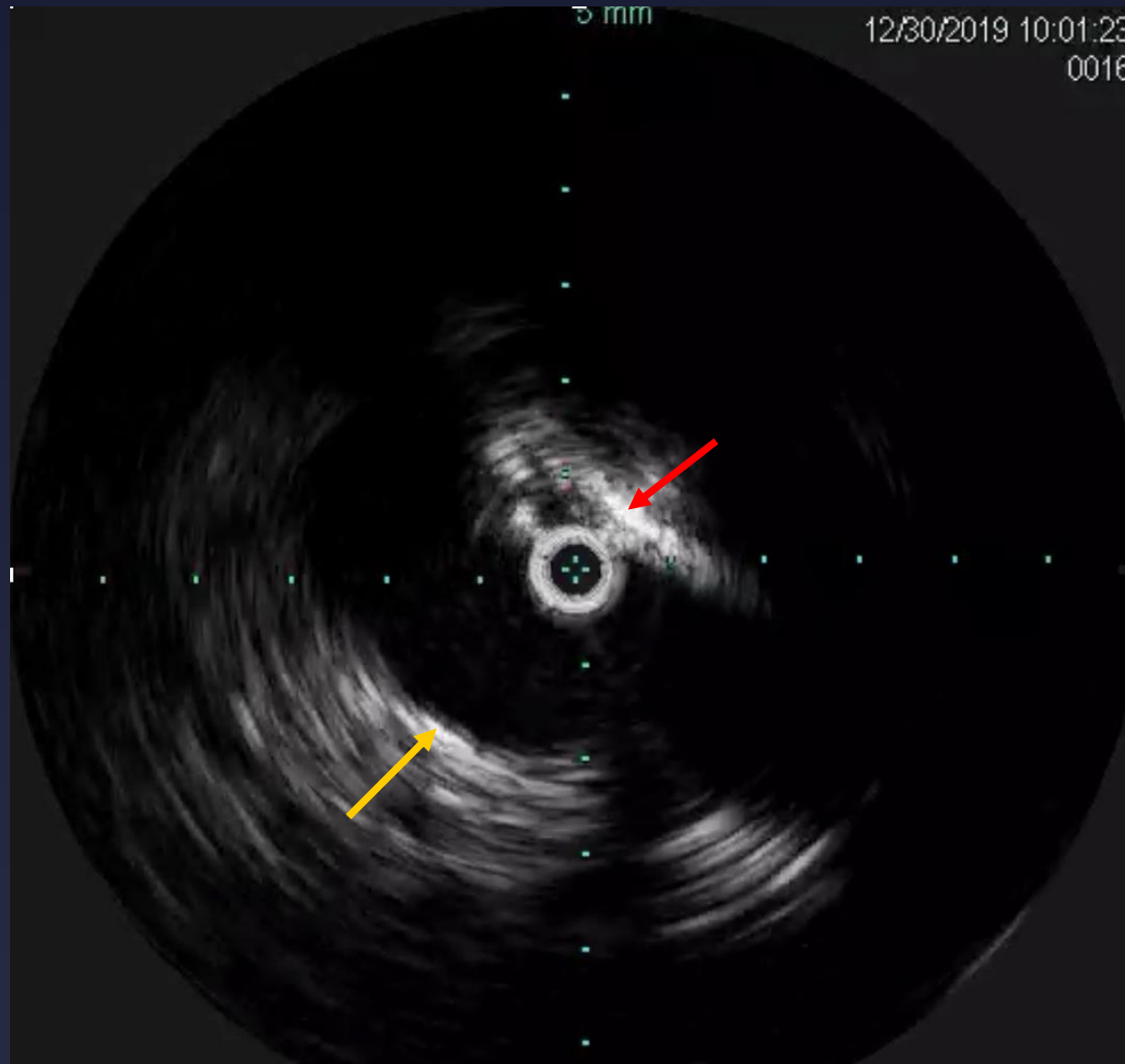


- Left external iliac venogram demonstrates pre-stenotic dilation of left common iliac vein on the basis of left common iliac vein compression (red arrow).

Post-Procedure 1

- Discharged with naproxen
- Returned at 1 month for follow-up, symptoms have progressed. Left groin/pelvic pain now more severe.
- Intermittent left leg heaviness continues.
- Plan for left iliac venogram/IVUS

Procedure 2



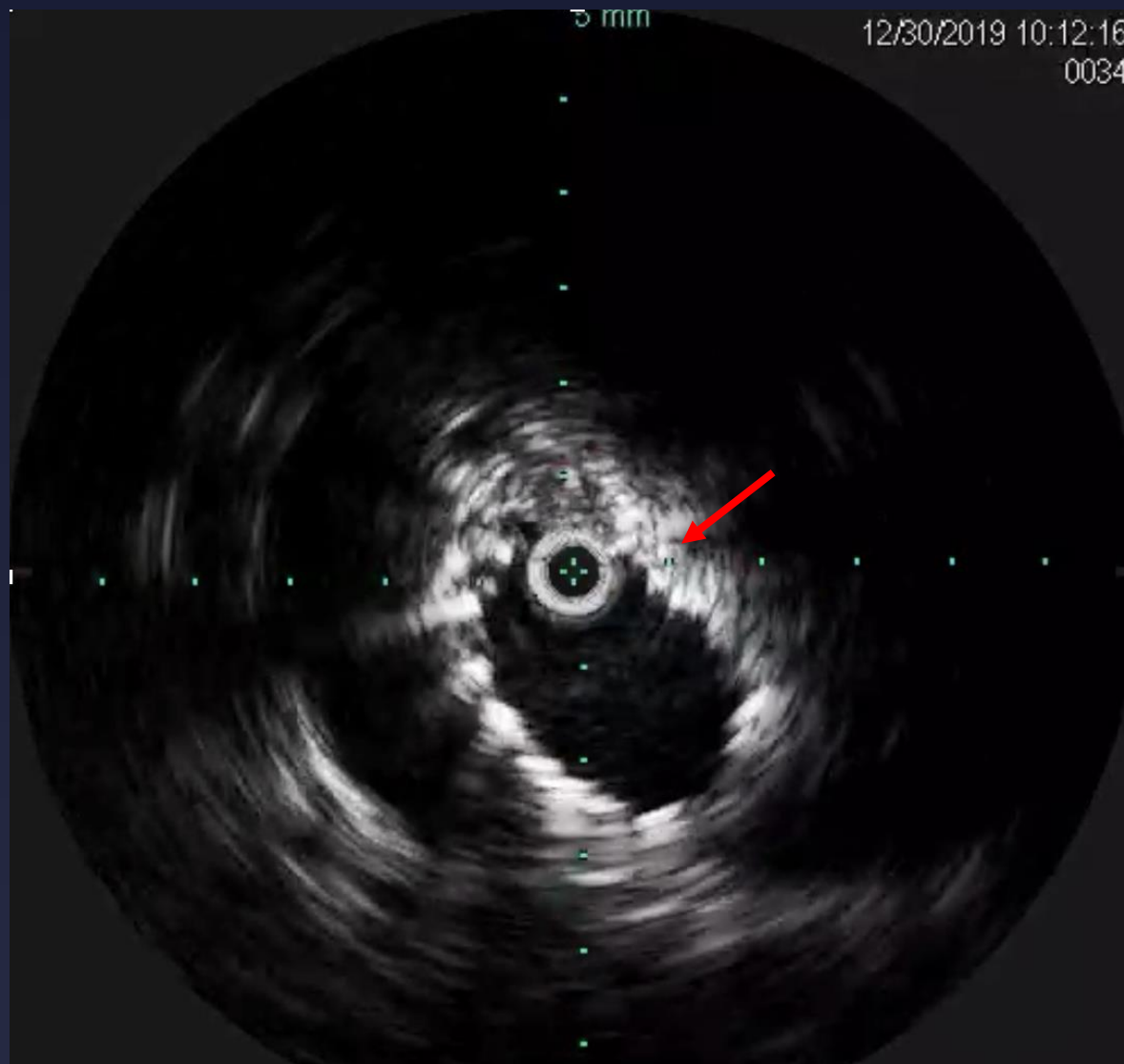
- Left iliac intravascular ultrasound demonstrates left common iliac vein compression (red arrow) by the right common iliac artery (yellow arrow)

Procedure 2

- IVUS confirms compression seen on venogram
- 14 x 140 stent placed



- Left external iliac venogram following left common/external iliac vein stent placement demonstrates no flow-limiting stenosis.



- Intravascular ultrasound following stent placement demonstrates left common iliac vein luminal restoration (red arrow) following stent placement

Post-Procedure 2

- Left groin/pelvic pain resolved
- Back pain following stent placement resolved after 1 week

Discussion

- Female pelvic venous disease can be multifactorial
 - Compression may have caused partially compensated symptoms, resulting in left ovarian vein valvular reflux
- Best order of treatment/assessment remains unknown
 - Evaluate left ovarian vein first or address compression first?
- Importance/role of renal vein compression unknown
 - Venogram impressive, but no flank pain or hematuria
 - Renal vein injury of other causes (surgical/thrombotic) frequently clinically occult and do not cause problems.