Endovascular and open management of renal vein nutcracker syndrome

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Disclosures

Speaker name:

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I have the following potential conflicts of interest to report:

☑ Consulting: Medtronic, Inc.; Cook, Inc., Terumo

☐ Employment in industry

☐ Stockholder of a healthcare company

☐ Owner of a healthcare company

☑ Other(s): Educational grafts (Medtronic, Cook, Abbott)

☐ I do not have any potential conflict of interest
Case

• 56 yo female with recurrent hematuria
  – Thorough GU/GYN work-up including UF Urology
• PMHx: MVP, chronic anemia
• PSHx: TAH, chole, breast augmentation
• CT: “Renal vein nutcracker”
Renal nutcracker syndrome: Surgical options

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Literature review

- N=30 patients (28 men)
  - 18.2 yo (R, 13-32)
  - Presenting symptoms
    - Hematuria (N=28)
    - L sided varicocele (N=26)
    - Flank pain (N=15)
  - Pressure gradient: 8.9 mmHg (R, 4.3-16.2) *
- 14x60 SMART stent (Cordis) placed in 100%
  - “Anchoring” in peripheral renal vein
- Median F/U: 36.0 months
  - N=30 patients “improved” at 1 month
  - All stents patent without stenosis on duplex

Case (cont’d)

- Home same day feeling well, no immediate complications
- Recurrent hematuria at 1m f/u

- Options????
Case (cont’d)

• Home same day feeling well, no immediate complications
• Recurrent hematuria at 1m f/u

• Options????
Case #4 (cont’d)

- D/C without post-operative complication
- Hematuria resolved at present
Conclusions

• Renal vein nutcracker
  • Anatomic findings + clinical symptoms
  • Hematuria, flank pain
• Endovascular options “usually” successful
• Open surgical repair possible
  • ? Reserved for endovascular failures ?
  • Renal venous bypass
  • Gonadocaval bypass
  • Renal autotransplantation
  • SMA re-implantation
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