Mikel Sadek, MD, FACS
Assistant Professor of Surgery
Associate Program Director for Vascular Surgery
Chief of Vascular Surgery, Bellevue Hospital

Vacuum-Assisted Venous Thrombectomy
Who, What, When and How
VEITH Symposium 2016

Disclosures
I do not have any financial relationships to disclose.

Guidance for Treatment

? Invasive Rx

Who?

• Highly individualized approach
  • Prevent PTS
  • “Open vein strategy”
• Considerations
  • Severity at presentation
  • Symptom duration
  • Life expectancy
  • Activity Level
  • Bleeding risk
  • Patient desire

Who and When?

• Patient factors
  • Contraindication to lytic therapy
  • Indicated for acute thrombus < 2 weeks
  • Subacute / chronic thrombus > 2 weeks
  • Lytic therapy less effective
• Anatomic factors
  • RA thrombus (PE in-transit)
  • Large volume thrombus
  • IVC filter thrombosis
  • Thrombus cephalad to filter
  • All patients with iliac thrombus may be considered.

What?

• Iliocaval DVT
  • May-Thurner
  • IVC filter

Case Series

- Technical Success
  - IVC 100% > RA 60% > PE 33%
  - NYU: IVC 75% (6/8 cases), 100% iliocaval patency at 3 months, 1 popliteal vein DVT.
  - RAPID (Registry of Angiovac Procedures in Detail)
    Database - Dr. Moriarty (UCLA)

Factors Associated with Successful Thrombus Extraction with the AngioVac Device: An Initial Operative Experience

How?

- Pre-procedure planning (US/CT/MR)
  - IVC filter
  - Above jugular sheath
  < 1% risk PE
- Venovenous bypass
  - Jugular, femoral, bilateral
  - Anatomy
    - inflow, outflow, conduit

How?

- Venovenous bypass
  - Angiovac cannula (22Fr)
    - 28Fr sheath
    - Balloon actuated funnel tip
  - Reinfusion cannula (18Fr)
    - Circuit + Bubble trap
    - Centrifugal pump (2L/min)
  - Up to 6 hours
  - Adjunctive tools
    - IVUS
    - Cleaner XT
    - PTA/STENT

Conclusions

- Who
  - Risk: benefit
- What
  - Iliocaval / RA
  - When
    - <2-4 weeks
  - How
    - Venovenous bypass
    - Adjunctive tools