


Complex Iliofemoral Disease: Hybrid open & Endovascular Techniques

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Disclosures

Consultant: BD Bard, Boston Scientific, Cook, Cordis, Gore, Medtronic, Philips, Synervention, Vevyn



When to Consider Hybrid Operations

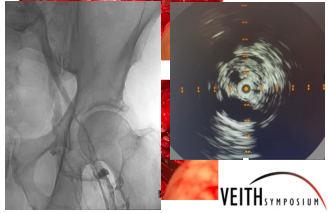

- ❖ Vast majority of venous procedures can be done endovascularly... and SHOULD be
- ❖ Hybrid operations = Difficult and can be associated with morbidity
- ❖ Endovascular **FAIL** points:
 - ❖ Inflow Disease – No Landing zone
 - ❖ Stent Thrombosis / Vein Occlusions - Unable to Cross
 - ❖ Various Stent Complications



Hybrid Interventions: Endophlebectomy with Outflow Stenting


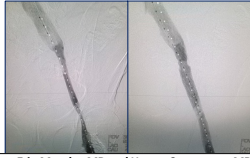
67M with recurrent DVT on indefinite AC
Pain, swelling, Skin changes CEAP 4B, Villalta 17, VCSS 15

- **Candidacy:**
 - Disease **AT** the confluence
 - **No safe landing zone**
- **Technique:**
 - Exposure/control of Cfv/profunda/femoral v.
 - Endophlebectomy

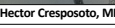
Hybrid Interventions: Endophlebectomy

- **Technique Continued:**
 - Long pericardial patch
 - Venography and IVUS
 - Stent of outflow and into the patch
 - Complications – Mostly bleeding

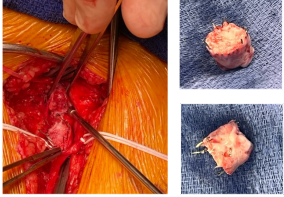

Transfusion: 2u PRBC
OR Time: 4.5 hours

Case: Erin Murphy, MD and Hector Cresposoto, MD



Hybrid Interventions: Stent Thrombosis

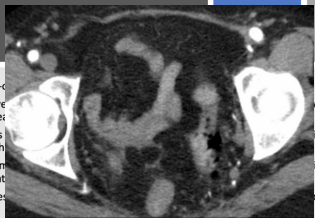
- **Candidacy:**
 - Cannot Cross
- **Technique:**
 - Midline Incision with Exposure
 - Stent/Vein Excision if able
 - Bypass with Stenting of bypass

Hybrid Interventions: Uncrossable Venous Thrombosis

Case

- 74-year-old male
- Left lower extremity DVT 34 years
- Left lower extremity DVT 34 years
- 22 years of symptoms above the knee
- Symptomatic claudication
- Unsuccessful medical treatment

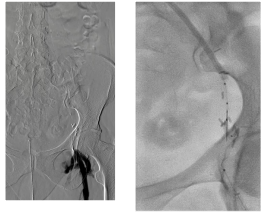


Hybrid Interventions: Uncrossable Venous Thrombosis

Operation

- Converted to open with lower midline abdominal incision and left groin incision
- Femoral-profunda confluence and common iliac vein patent with a thin, fibrotic cord between
- End-to-end anastomosis between left CFV at the femoral-profunda confluence and 14mm PTFE graft
- Retroperitoneal tunnel, end-to-end to left CIV

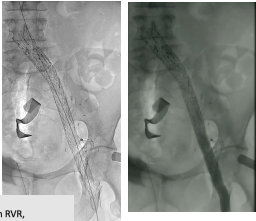
Case: Erin Murphy, MD and Hector Cresposoto, MD



Hybrid Interventions: Uncrossable Venous Thrombosis

Operation

- Stenting of bypass pursued to reinforce the anastomoses and assist with maintaining lumen
- 14x150mm Abre caudally and 16x120mm Abre stent placed cranially with 3cm overlap
- Post-dilated the stents with 12mm, then 14mm balloon
- Anastomotic bleeding was noted during stent dilation, controlled with manual pressure

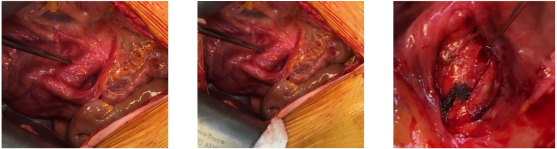


- Complicated by atrial fibrillation with RVR, retroperitoneal bleed, AKI
- Discharged on post-operative day 15 on coumadin

Hybrid Interventions: Stent Complications

32F with BMI 19 with NIVL and ankle edema

Stent – 20mm → Chronic back pain

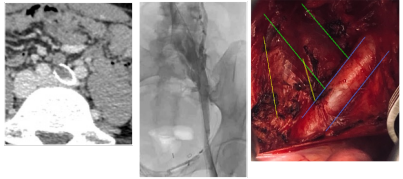


Images and Surgical Correction (not the complication) Courtesy of Kathleen Gibson, MD

Hybrid Interventions: Stent Complications

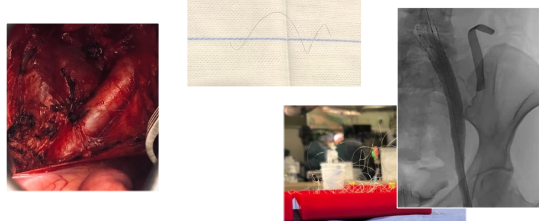
Explant & Re-stent

- 23F MTS
- Recurrent Symptoms
- NO PMH
- Considerations: AGE + Wallstent



VEITH SYMPOSIUM

Hybrid Interventions: Explant & Re-stent



Case: Erin Murphy, MD and Greg Stanley, MD

Hybrid Interventions: Explant & Re-stent



Case: Erin Murphy, MD and Frank Arko, MD

Conclusions

- ❖ Hybrid Operations are feasible
- ❖ High success
- ❖ Morbidity is related to bleeding
- ❖ Techniques to limit bleeding – large patches to limit suture line disruption, stenting while still open to allow repair

These operations are not first line and reserved for stenting failures

Thank you!!!

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