Endovascular Repair of TAAA Is The Best Option For Most Patients

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Conflict of Interest

• Cook Medical Inc.
  – Research grants
  – Royalties on licensed patents

Which is Best?

• Type of repair: Endo vs. Open
• Comorbidity
• Arterial anatomy
  – Substrate for endovascular
  – Extent of repair
• Surgeon experience
  – Details of patient selection and operative technique

Endovascular Technique: Still Evolving

• Branch attachment
  – Fenestration-based vs. Cuff-based
  – Balloon-expanded vs. Self-expanding
• Device design
  – Off-the-shelf vs. Custom
  – Low-profile (18 Ch) vs. Standard (22 Ch)
• Adjunctive techniques
  – Spinal drainage vs. Flow preservation

Cuff-based Branches

Fenestration-based Branches
Advantages of Endovascular Repair

- Lower rates of mortality and morbidity
- Normal activity at a month
- Regardless of hostile abdomen and aneurysm extent

Limitations of Endovascular Repair

- Trans-femoral access (18 French)
- Dissection
- Marfan’s
- Multiple small renal arteries
- Severe tortuosity
- More extensive (includes implantation sites)
- Long-term fate of the branches

Results by Branch Type

**Cuff-based**
- The stent graft is stable
- 10% of the branches occlude
- 5% paraplegia rate regardless of aneurysm extent

**Fenestration-based**
- The branches fracture, dislocate, or migrate
- 10% of branches fail in other ways
- 5% paraplegia rate, depending on aneurysm extent

Flexible Cuff-based Branches

- Occlusion rate depends on the flexibility of the covered stent
  - Stiff (Fluency/Wallstent) 5%
  - Flexible (Viabahn/Zilver) 0%

Recommendations

- A healthy young patient with a single cavity aneurysm – open
- A frail old patient with a large multi-cavity aneurysm – endovascular
- Anyone else – go to a high-volume center and have them do what they do best