Parallel Endografting Utilizing the Trivascular Abdominal Aortic Stent Graft System

Steve Henao MD FACS FACC
New Mexico Heart Institute
Albuquerque, NM USA
Disclosure

Speaker name: Steve Henao MD FACS FACC

I have the following potential conflicts of interest to report:
• Trivascular Medical Educator
• Approximately 20% to 30% of patients are unsuitable anatomic candidates for standard EVAR

• Within this subgroup, 50% to 60% of cases are ineligible for EVAR because of proximal aortic neck anatomy limitations
snEVAR

- consider for high risk for open repair
- immediate availability
- low profile (percutaneous?)
- lower cost
- type Ia endoleak after snEVAR occurs at a significantly higher rate than after fenestrated repair
  - (4.3% vs 10%; P = .002)
- attributed to gutters around the chimney graft
- reflects degree of conformational change the aortic endograft undergoes to accommodate the interposition of the chimney stent between the aortic endograft and native aorta


Steve Henao MD
Current FDA-Approved EVAR Devices – Sealing Mechanism

Self-Expanding

Gore  Endologix  Lombard  Medtronic  Cook

Polymer Ring

TriVascular

Steve Henao MD
• Self-expanding stent grafts may not conform to an irregular luminal surface
• Trivascular Ovation *molds and conforms* to irregular luminal surface, creating a customized seal.

![Diagram of self-expanding stent grafts and Ovation grafts]

Steve Henao MD
- bilateral, ultrasound guided brachial and femoral access
- 260 mm Rosen wires (brachial)
- 260 mm Meier wires (femoral)
- bilateral brachial 7 Fr 90 cm sheaths
- Atrium iCast covered stents
- renal selective catheterization and stenting
• preoperatively assess size and integrity of subclavian, axillary and brachial arteries

• determine candidacy for open versus percutaneous options
• Coda balloon ‘deflection’
• confirm iCast level/position
• optimize obliquity for SMA ostia confirmation
- Advance main body into position
- inflate iCasts
- initiate polymer
• confirm proximal seal
• then deploy limbs
2013-2015
12 chEVAR cases
Ovation Prime or Ovation iX platform
100% iCast stents
63% male
mean age 78
ASA score 3+

Steve Henao MD
• mean follow-up: 9.4 months
• 1 peri-operative death (MI)
• 1 brachial artery pseudoaneurysm
• 1 type Ia endoleak (oversized graft with infolding)
• NO limb thrombosis
• NO renal stent thrombosis
• Parallel endografting utilizing ‘o-ring’ sealing technology appears to offer encouraging short-term results for juxtarenal AAA repair in high risk patients

• Sizing the Ovation device requires a different set of ‘rules’ that should actively discourage oversizing that may predispose to type I endoleak

Steve Henao MD
Steve Henao MD FACS FACC
New Mexico Heart Institute
Albuquerque, NM USA