F/BEVAR for Complex Aortic Aneurysms Among Standard and High-Risk Patients

These Procedures Should Be Used To Treat All Anatomically Suitable Patients

Carlos H. Timaran, MD
Chief, Endovascular Surgery
G. Patrick Clagett Professor in Vascular Surgery
Professor of Surgery
University of Texas Southwestern Medical Center
Dallas, TX, USA

Disclosures

- Timaran, CH: Honoraria / Consultant / Research
  - Abbott Vascular
  - W.L. Gore
  - Cook Medical Inc
  - Atrium

Short necked and complex AAAs

20–40%

Thoracoabdominal Aortic Aneurysms

Open TAAA repair

Mortality in medicare patients

Overall Mortality:
19% at 30 days
31% at 1-year


Fenestrated/Branched Standardized Designs

Types I-IV TAAAs

>60,000 fenestrated endograft implants*

Expo, Mexico, Argentina, South America, Canada, US (Physicians-initiated IDE, US trial)
Z-FEN FDA Approval
April 4, 2012

Physician-sponsored Investigational Device Exemption (IDE)

F/BEVAR & Surgical Risk

Whether F-BEVAR should also be offered to standard risk patients has not been established as most series until now have included preferentially patients unfit for open repair

The aim of this study was to evaluate perioperative and early outcomes of F-BEVAR among patients at standard vs. high-risk for open repair.

206 patients underwent BFBEVAR
- 144 with > 6 month F/U

Fenestrated-Branched Endografts
UT Southwestern / Dallas VA Experience 2013-2017

Gender

- 81% Male
- 19% Female

- Median age, 72 yrs
- Median aneurysm size, 58 mm (IQR, 53-63)

Fenestrated-Branched Endografts
UT Southwestern / Dallas VA Experience 2013-2016

- 53% Standard
- 39% High-risk
- 4% other

n=206

Standard vs. High-Risk

n=206
**Fenestrated-Branched Endografts**  
**UT Southwestern / Dallas VA Experience 2013-2016**

**Early results:**
- Technical success 100%
- Median operative time
  - High-risk 243 minutes (IQR, 194-301)
  - Standard-risk 192 minutes (IQR, 132-283)
- Median hospital stay
  - High-risk 4 days (IQR, 2-6)
  - Standard-risk 3 days (IQR, 2-4)
- Median ICU stay
  - High-risk 2 days (IQR, 1-4)
  - Standard-risk 1 day (IQR, 1-3)

**30-day results:**
- Mortality, 2 high-risk patients (1%)
  - Urosepsis & intracranial bleeding
- Complications
  - High-risk, 35%
  - Standard-risk, 28%

**1-year results:**
- Freedom from endoleak 85±9%
- Freedom from re-intervention 78±7%
- Target vessel patency 98±9%
- Patient survival
  - High-risk 87%
  - Standard risk 100%
- Sac shrinkage (>5mm) was noted in 78% of patients with >6 months follow-up

**Conclusions**
- F-BEVAR is safe and effective procedure for patients at high and standard risk for open repair that are not eligible for standard EVAR
- Standard risk patients benefit the most from F-BEVAR given their significantly improved survival compared to high-risk patients
- F-BEVAR should be expanded to conventional risk patients