Iliac Branched Devices Outcomes and Surveillance Modality

I. Roy, S. Vallabhaneni, R. McWilliams, R. Fisher

Mr Iain N Roy
Vascular Research Fellow
Liverpool Vascular & Endovascular Service
Disclosure of Interest

Speaker name: Iain N Roy

I have the following potential conflicts of interest to report:

• Consulting
• Employment in industry
• Shareholder in a healthcare company
• Owner of a healthcare company
• Other(s)

• X I do not have any potential conflict of interest
Iliac Branched Devices

- Preservation of Internal Iliac Artery (IIA) while allowing sealing distal to ectatic Common iliac artery (CIA).
- Reduce incidence of:
  - Gluteal Claudication
  - Impotence
  - Colonic Ischemia
Inpatient Results

Follow-up Results

Imaging Results / Issues
Study

• Retrospective analysis of first 33 IBDs used in our institution, with emphasis on subsequent surveillance.

• Reviewed;
  Operative Notes & Imaging
  Discharge Letter
  Subsequent Clinic letters
  Secondary interventions
  Surveillance imaging

  from prospective database
Patients & Devices

• All IBD’s in our institution between 2010 -2015
• 33 IBDs implanted in 32 patients
  24 Zenith™ IBD (Cook), 9 Excluder ™ IBE (Gore)
• 31 (97%) Male Patients
• Median Age 76 (IQR 71-81)
• Inserted with;
  1 bEVAR
  4 fEVAR
  26 EVAR
  1 isolated IBD devices
Inpatient Results

Follow-up Results

Imaging Results / Issues
In-patient Results

• 2 Intra-operative Technical Failures (94% Success)
  – 1 Mal-deployed, 1 Failed IIA cannulation
  – 1 type 1b endoleak from IIA (resolved by 1 month)
  – Represent only 2 IIA occlusions (6% occlusion rate)

• 4 Patients required EIA wall stents intra-op
  (Compared to 3 for contralateral sides)
Inpatient Results

Follow-up Results

Imaging Results / Issues
Surveillance

- Median Follow-up 22 Months (IQR 16-33)
- Surveillance includes visits at 1 month and annually thereafter – AXR & DUS
- 32 Patients
  - 2 patients transferred surveillance to another institution
  - 2 patients died (Not aneurysm related)
  - 1 patient stopped surveillance (palliative diagnosis)
- 79 of 80 indicated surveillance visits completed
Results

• No IBD related endoleak detected
• Freedom from IBD Secondary intervention

5 Interventions

1 x Covering IIA gate
2 x Angioplasty / Stenting IIA
2 x Wall stents for CIA/EIA stenosis
Inpatient Results

Follow-up Results

Imaging Results / Issues
Surveillance - Imaging

Surveillance included;

82 Duplex Ultrasound Scans & 41 CTA’s

CTA

No IBD endoleak
All adequately Imaged IIA flow

DUS

No IBD endoleak
Attempt to identify IIA flow was specifically reported on 52 occasions

73% seen, 27% insufficient views
Attempt to identify IIA flow wasn’t mentioned on 30 occasions.
Conclusions

• IBD’s are safe but challenging procedures
• IIA patency is excellent, but requires secondary interventions
• DUS require specific protocols in IBD patients to ensure imaging of IIA
• DUS has a ~75% ability to identify IIA flow
  – Probably acceptable in the context of long term follow-up