VALUE OF AORTIC (AAA) ENDOGRAFTS FOR TREATMENT OF AORTOILIAC OCCLUSIVE DISEASE: WHICH DEVICE IS BEST AND RESULTS

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DISCLOSURES
WL GORE
ENDOLOGIX
COOK MEDICAL
MEDTRONIC

Endo Techniques for Rx AIOD
- CIA – Retrograde femoral
- EIA – Contralateral femoral
- Flush CIA – Brachial
- Snaring and re-entry catheters
- Kissing balloons/stents
- Stent grafts

Longer term Data on Patency of Kissing Stents

<table>
<thead>
<tr>
<th>Study</th>
<th>3 year</th>
<th>4 year</th>
<th>5 year</th>
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<td>Haulon 2002</td>
<td>79%, 98%</td>
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<tr>
<td>Sharafuddin 2008</td>
<td>81%, 94%</td>
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<td>Abello 2012</td>
<td></td>
<td>65%, 82%</td>
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• Above studies have significant variability of TASC classification and Rutherford category
• Primary assisted patency 65% at 2 years in more advanced TASC lesions
• Covered stents appear to have better patency than bare metal stents in TASC C and D lesions
• This effect may also apply to “kissing” stents

Kissing Stents
• Patency affected by
  - Radial mismatch associated with failure
  - Malalignement
  - Crossing stent configuration associated with patency loss
• Raises the bifurcation

5. Mwipatayi BP, COBEST Co-investigators. JVS 2011
Primary and assisted patency rates of non-protruding kissing stents at 2 years were reported as 94.1% and 100%, compared with 33.2% and 48.3% if kissing stents overlapped into the aorta.
14 patients treated with Gore Excluder

- Retrospective review, 2001-2009
- 14 patients (mean age 59)
- Mean f/u 62 months (11-96 mo)
- Claudication 50%
- TASC C + D

- Technique
  - Lysis
  - Gore Excluder
  - Contra limb recanalized through graft
  - Kissing balloons
How about Gore IBE for AIOD?

- Avoids having to cannulate contra limb through graft via brachial approach
• 91 patients (10 centers)
• Aorto-iliac Occlusive disease (non-aneurysmal)
• Success
• Clinical Success (Rutherford classification, ABI's)
• Follow-up: Mean 22.2 +/- 11.2 months
Oversizing in 12mm tube...

AFX Micro CT Scan
- Axial Slice
- Partial PTFE Reconstruction

TASC D Lesions

Courtesy of Zachary Arthurs, MD
Procedural Complications

Adjunctive Procedures:
56 patients (64%)

Patency Curves:

• 10 high-risk patients (8 male and 2 female)
• Mean age was 59 +/- 6 years (range, 50-69 years)
• Mean follow-up time was 40.6 +/- 24 months (range, 4-81 months)

100% technical success

• Primary and secondary patency rates were 80% and 100%, respectively.
• Mean improvement ankle brachial index was 0.50 +/- 0.08 (P=0.028) and 0.50 +/- 0.01 (P=0.034) in the left and right legs, respectively.
• Complications requiring early reintervention (n=2)
  • one expanding hematoma from the percutaneous access site
  • one acute iliac artery thrombosis.
• Additionally, one patient underwent repeat angioplasty/stenting for threatened endograft limbs at 4 months.

Eight patients needed additional stent placement
Limitations of the AFX Technique

- Larger profile sheath
- 4cm main body
- Potential for coverage of collaterals
- Cost ? (depends on procedure being compared)

Summary

- Aorto bifemoral bypass for AIOD remains the gold standard…. For now
- TASC D lesions can and should be treated with endovascular means when appropriate

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• In complex AIOD, kissing stent placement is not indicated, and the aortoiliac confluence has to be rebuilt.
• Recreating aortic bifurcation with covered stent (Gore IBE vs AFX) may confer unique advantages, appears to be safe and have excellent short term patency rates.