New Improved Techniques For Open TAAA Repair: Better Organ Protection And Using Hybrid (Gore) Stent Graft For Faster Branch Revascularization

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Disclosures
Lecturer at symposia hosted by Cook, Inc., Bolton Medical, Jotec® s.r.l., Medtronic, Inc., W.L. Gore and Associates, TriVascularTM, Cordis Corporation, Maquet Getinge Group and Dr. Franz Köhler Chemie GMBH

PI of a trial granted by Dr. Franz Köhler Chemie GMBH

Off label discussion regarding use of crystalloid solutions

TAAA surgical repair: open surgery

Perioperative acute renal dysfunction in up to 70% of pts.
Hemodialysis in 6-10%
Strong predictors of mortality

Renal protection

Lemaire, Cibellini et al., J Vasc Surg 2009

Reno-visceral protection strategies

- LHBP
- Cold renal perfusion (Custodiol™)
- Warm blood visceral perf.
- Technical adjuncts

Visceral arteries reconstruction

Traditional techniques
1. Carrel patch
2. Direct reimplantation
3. Single bypass
4. Multi-branched graft
1) Carrel patch reimplantation (VAP)  
Usually LRA too distant for visceral patch inclusion 

RISK OF PATCH LATE DILATATION  
(20% at 6 yrs)  
Tshomba Y, Chiesa R et al, Eur J Vasc Endovasc Surg 2005

2) Direct “on graft” reimplantation  
3) Single bypass 

But after viscera de-rotation… 
Intra-operative stenting  
RISK OF GRAFT KINKING / THROMBOSIS

4) Multi-branched grafts  
TIME CONSUMING, ↑ SUTURE LINES (redo surg., connective tissue disorders)

What’s new?  
Sutureless distal anastomosis  
Gore Hybrid Vascular Graft
San Raffaele Technique

San Raffaele Experience 1993-2015

771 TAAA OR
- CT = 5
- SMA = 7
- RRA = 21
- LRA = 63

Sep 2012 – April 2015
96 visceral vessels with Gore Hybrid (GHVG)

Multiple application fields

Customized and fast reconstructions

San Raffaele Experience 2012-2015

Indication to GHVG
- Remote ostium location: 71%
- Vessel wall poor quality: 46%
- Ostial stenosis: 24%

Current results

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<thead>
<tr>
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<th>Standard (Pts = 657)</th>
<th>GHVG (Pts = 96)</th>
<th>p</th>
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<tbody>
<tr>
<td>Cold renal isch. time (min)</td>
<td>33 ± 9</td>
<td>27 ± 12</td>
<td>.031</td>
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<tr>
<td>Acute renal failure</td>
<td>86 (14%)</td>
<td>8 (10%)</td>
<td>NS</td>
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CTA follow-up (15 months)

Gore Hybrid primary patency
77/84 (92%)

Conclusions

Gore Hybrid in TAAA OR

• Appealing technical adjunct
• Indicated in ~40% of open TAAA pts.
• Useful in challenging anatomies, stenosis or dissect.
• Shorten organ ischemic times