Early experience of the VBX in branched procedures

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Disclosure

Speaker name:

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I have the following potential conflicts of interest to report:

- Consulting: Gore, Medtronic, Cook, Cordis
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s): Research grant by Gore
Main failure modes after BEVAR
The ideal bridging stent should....

- Cover the distance between the main body and the target vessel (many length options)
- Good visibility during implantation
- Respect the angulation of the target vessel
- High radial forces and resistance to compression (calcified ostium, CHEVAR)
- Stent retention during navigation
- High trackability of the delivery system
- Wide range of sizing and oversizing
- Durable after flaring, during the cardiac cycles, the diaphragm movements and after aortic remodelling
Initial clinical experience with VBX

-Demographics-

376 VBX implanted during the last 14 months
50 patients with TAAA with FU>6 months
Mean age 72 yrs
40 male patients (80%), 10 female patients
13 symptomatic cases (26%)
Post dissection aneurysm 7 cases (14%)
Operative data

- Mean amount of contrast agent 195 ml
- Mean duration of hospital stay 8 days
- Mean procedure time 197 minutes
- No operative mortality
- Two patients died during the FU
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Stents used

- **163 VBX**
  - VBX alone: 122 (75%), relined with Viabahn: 12 (7%), relined with Advanta: 4, relined with BMS: 7 (4%)

- **24 Viabahn**

- **60 Advanta**
  - Advanta alone: 20 (33%), relined with Viabahn: 10 (16.5%), relined with BMS: 20 (33%)
In 75% of all target vessels was used only one VBX
The ideal bridging stent should....

- Cover the distance between the main body and the target vessel (many length options)
- **Good visibility during implantation**
- Respect the angulation of the target vessel
- High radial forces and resistance to compression (calcified ostium, CHEVAR)
- Stent retention during navigation
- High trackability of the delivery system
- Wide range of sizing and oversizing
- Durable after flaring, during the cardiac cycles, the diaphragm movements and after aortic remodelling
Even in overlapped zones with other stents visibility is excellent
The ideal bridging stent should….

• Cover the distance between the main body and the target vessel (many length options)
• Good visibility during implantation
• Respect the angulation of the target vessel
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• Stent retention during navigation
• High trackability of the delivery system
• Wide range of sizing and oversizing
• Durable after flaring, during the cardiac cycles, the diaphragm movements and after aortic remodelling
The stent accommodate also to strong angulations
The ideal bridging stent should....

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- Good visibility during implantation
- Respect the angulation of the target vessel
- High radial forces and resistance to compression (calcified ostium, CHEVAR)
- Stent retention during navigation
- High trackability of the delivery system
- Wide range of sizing and oversizing
- Durable after flaring, during the cardiac cycles, the diaphragm movements and after aortic remodelling
Bridging of a calcified and narrow right renal artery
The ideal bridging stent should....

• Cover the distance between the main body and the target vessel (many length options)
• Good visibility during implantation
• Respect the angulation of the target vessel
• High radial forces and resistance to compression (calcified ostium, CHEVAR)
• **Stent retention during navigation**
• **High trackability of the delivery system**
• Wide range of sizing and oversizing
• Durable after flaring, during the cardiac cycles, the diaphragm movements and after aortic remodelling
Lost covered stent had to be parked in the iliac artery
Technical success

• Stent retention during navigation: 100%
• Trackability of the delivery system also without sheath in place
• Placement at the desired location
The ideal bridging stent should:

- Cover the distance between the main body and the target vessel (many length options)
- Good visibility during implantation
- Respect the angulation of the target vessel
- High radial forces and resistance to compression (calcified ostium, CHEVAR)
- Stent retention during navigation
- High trackability of the delivery system
- **Wide range of sizing and oversizing (customization)**
- Durable after flaring, during the cardiac cycles, the diaphragm movements and after aortic remodelling
Branches with VBX alone

- CT: 21
- SMA: 25
- RRA: 37
- LRA: 37
- Accessory renal arteries: 2
VBX configurations allows 76 customized stenting

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<th>Stent Labeled / Nominal Diameter (mm)</th>
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<th>Introducer Sheath Size (Fr)</th>
<th>Maximum Post-dilated Stent Diameter (mm)*</th>
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- Stent retention during navigation
- High trackability of the delivery system
- Wide range of sizing and oversizing (customization)
- Flexibility and durability after flaring, during the cardiac cycles, the diaphragm movements and after aortic remodelling
Three stent stenoses at the distal end of the stent (1.8%)
All stenoses in the same patient (relined with Viabahn)
One stent occlusion (0.6%)
Four type Ic endoleaks (2.5%)
Two type Ic endoleaks with other stents (3.3%) relined with VBX
Conclusions

- Clinical experience and experimental studies show an excellent performance of VBX as bridging stent in complex aortic procedures.
- Additional evaluation of long-term results is ongoing.
home page: www.gefaesschirurgie-muenster.de

Thank you!

Universitätsklinik Münster  St. Franziskushospital Münster
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