**Value of the CERAB Procedure for Failed Iliac Stents: Technical Tips and Best Stent-Graft**

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**Disclosure**

Speaker name: Maria Antonella Ruffino MD, EBIR

I have the following potential conflicts of interest to report:

- Receipt of grants/research support
- Receipt of honoraria and travel support
- Participation in a company sponsored speakers’ bureau
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company

X I do not have any potential conflict of interest

**TECHNICAL SUCCESS: 99.1% (572/532)**

Most of the lesions TASC D

BMS 91.9% (57.8% SE) - CS 8.1%

Protruding in distal aorta and crossed 67.3%

30-day complication rate 8.2% (bleeding 2.3%)

@24 MONTHS

Primary patency: 81% (open surgery 93%)
Secondary patency: 95%

@60 MONTHS

Primary patency: 73%
Secondary patency: 100%

**RATE OF INTERVENTIONS AT 2 YEARS**

between 0% and 62.5% with a mean of 20.9%

**RELINING WITH BARE METAL STENT OR STENT-GRAPHTIPS**

Patency can be influenced by procedural choices:

- Type of stent
- Stent protrusion
- Pre and post-dilation
- Geometrical consequences of KS (large recirculation zones at the aortic bifurcation)*
- Previous intervention was found as a predictor of secondary patency loss for KS

Patency can be influenced by procedural choices:

- Larger profile sheath
- AFX have to be deployed directly on the native aortic bifurcation
- Predilation of chronic occlusion is imperative (severe resistance during deployment to allow easier rotation of the device as needed)
- Previous 24h catheter-direct thrombolysis
- Small aortic diameter vs. big device diameter
- Length of aortic body
- Risk of overstenting of lumbar arteries, IMA
- High rate of adjunctive stenting of distal aorta (calcification) and of iliac limbs to avoid collapse (up to 59%)
- Procedure more time consuming/ higher level of technical skill

**RELINING WITH AORTIC DEVICES**

EVAR is not an “one size fits all”

It is designed for aneurysm disease, not stenotic conditions.

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AVAILABLE SELF-EXPANDABLE STENTGRAFTS

**Self-Expandable**
- Boston Scientific Wallgraft
- Bard Flexiency Plus® Framed
- Bard COVERA®
- Gore Viabahn®

**+ AORTIC CUFF**

**LIMITS:**
- Low radial force
- High profile
- Not customizable
- Can’t be overdilated to adapt patient anatomy
- Aortic cuff intended for aneurysmatic disease

AVAILABLE BALLOON-EXPANDABLE STENTGRAFTS

**Balloon-Expandable**
- iCAST/Advanta V12, Getinge:
  - no stentgraft larger than 10 mm
- LifeStream, BD:
  - high rate of in-stent restenosis in iliac procedures*
- Viabahn VBX, Gore:
  - Expansion larger than 13 mm is outside IFU
  - 16 mm: technical limit of the device

*BD, Bard field notice October 2018

**Low profile: 9 Fr.**

**12 mm Aortic stent can be postdilated up to 20 mm**

**Main body**
- BeGraft Aortic
  - Diameters: 12-14-16-18-20-22-24 mm
  - Max. Post-dil.: 30 mm (on label)
  - Length: 19-29-39-49-59 mm
- Flexible stent design
- Less shortening
- Good trackability/visibility

**Legs**
- BeGraft Peripheral
  - Diameters: 5-6-7-8-9-10 mm
  - Length: 18-22-27/28-37/38-57/58 mm

**This combination of stentgrafts allows physicians to respect the criteria of CERAB also in case of previous failed iliac stenting**

**CASE 1**
Male, 57 yo, active smoker
- 2016: PTA + Stenting RCIA (balloon-expandable BMS, Visi-Pro, Medtronic) + R fem-fem bypass
- May 2019 – right CLI, stent occlusion, relining with self-expandable CS (Viabahn, Gore)
- October 2019 – right CLI, RCIA and REIA occlusion

**Pharmacological thrombolysis**
- Alteplase 3.5 mg + 3.5 mg/250 ml saline 63ml/h
- Alteplase 2 mg/500ml saline 42ml/h
- Heparin 5000UI/500ml saline 32ml/h (sheath)

**16-10-19**

**BeGraft Stentgraft Bentley InnoMed, Hechingen**

- This combination of stentgrafts allows physicians to respect the criteria of CERAB also in case of previous failed iliac stenting
CASE 1

Male, 72 yo, former smoker, hypertension
- 2015 – aortic bifurcation kissing stenting with SE BMS
- June 2018 – right limb claudication ≤100m
- June 2018 DUS – partial occlusion of aortic carrefour and right CIA occlusion

CASE 2

Male, 72 yo, former smoker, hypertension
- 2015 – aortic bifurcation kissing stenting with SE BMS
- June 2018 – right limb claudication ≤100m
- June 2018 DUS – partial occlusion of aortic carrefour and right CIA occlusion

CASE 3

Male, 69 yo, active smoker, hypertension
- 2014 – SE BMS kissing stenting
- June 2019 – right buttock claudication ≤50 m CLI
- June 2019 – CT scan: CIA in-stent restenosis

CASE 3

Male, 69 yo, active smoker, hypertension
- 2014 – SE BMS kissing stenting
- June 2019 – right buttock claudication ≤50 m CLI
- June 2019 – CT scan: CIA in-stent restenosis
TAKE-HOME MESSAGE

- Iliac stents DO re-stenose
- CERAB is a tailor-made solution which can be adapted to almost all anatomies to restore blood flow in both de-novo and/or failed iliac stenting
- Particular attention must be paid to:
  - Previous type of iliac stenting
  - Patient anatomy (sizing & visceral vessels take-off)
  - Right device (stent) selection
- With the Bentley BeGraft Bentley stentgrafts, almost all procedures can be performed with:
  - 9F. introducer sheath
  - a single 12 mm aortic stentgraft
  - 6 Fr. introducer sheath
  - two 8 mm peripheral stentgrafts

CERAB
- 9F and 7F sheaths
- BeGraft Aortic 12x29 mm
- Aortic stent overdilation at 20 mm
- 2x BeGraft Peripheral 10x57 mm