Complexity of Iliac Occlusive Disease, Current Treatment Algorithm, and Treatment Gaps

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Disclosure

Speaker name:
Michele Antonello
I have the following potential conflicts of interest to report:

☒ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☐ I do not have any potential conflict of interest
BACKGROUND

- Heavy calcification
- Long lesions
- Common Femoral Artery
- Aortic bifurcation
- Renal artery
- Complex procedure
- Role of Thrombolityc therapy
- Type of stent
INRODUCTION
Previous experiences demonstrated a freedom of binary restenosis > 90% at 1 year when CS was used.

In 2011 the COBE STentulceme randomly treated an increase in favorable patient at 18 months in favor of CS compared to BM in TASC C and lesions.

In the world practice the use of covered or uncovered stent in several conditions is strictly related not only to the TASC classes (C or D lesions) itself but also to the lesion quality, extent and laterality.
A comparison of covered vs bare expandable stents for the treatment of aortoiliac occlusive disease

Bibombe P. Mwipatayi, MMed (Surg), FCS (SA), FRACS, Shannon Thomas, MBBS (Hons),
Jackie Wong, MPH, Suzanna E. L. Temple, PhD, MBA, Vikram Vijayan, MRCS, FRCS,
Mark Jackson, MD, FRACS, and Sally A. Burrows, BMath Grad Dip Med Stat, on behalf of the
Covered Versus Balloon Expandable Stent Trial (COBEST) Co-investigators, Perth, Western Australia
and Gold Coast, Queensland, Australia

Reintervention rate

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Outcomes of polytetrafluoroethylene-covered stent versus bare-metal stent in the primary treatment of severe iliac artery obstructive lesions

Michele Piazza, MD, Francesco Squizzato, MD, Gaya Spolverato, MD, Luca Milan, MD, Stefano Bonvini, MD, Mirko Menegolo, MD, Franco Grego, MD, and Michele Antonello, MD, Padova, Italy

J Vasc Surg 2015
CONFORMABILITY

External Iliac Artery

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External Iliac Artery
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External Iliac Artery
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Geometrical consequences of kissing stents and the Covered Endovascular Reconstruction of the Aortic Bifurcation configuration in an in vitro model for endovascular reconstruction of aortic bifurcation

Erik Groot Jebbink, MSc,a,c Frederike A. B. Grimme, MD,a Peter C. J. M. Goverde, MD,d Jacques A. van Oostayen, MD, b Cornelis H. Slump, PhD,c and Michel M. P. J. Reijnen, MD, PhD,a Arnhem and Enschede, The Netherlands; and Antwerp, Belgium

J Vasc Surg 2015
AORTIC BIFURCATION
AORTIC BIFURCATION
AORTIC BIFURCATION
Three-year outcome of the covered endovascular reconstruction of the aortic bifurcation technique for aortoiliac occlusive disease

Kim Taeymans, MD, Erik Groot Jebbink, MSc, Suzanne Holewijn, PhD, Jasper M. Martens, MD, Michel Versluis, PhD, Peter C. J. M. Goverde, MD, and Michel M. P. J. Reijnen, MD, PhD, Antwerp, Belgium; and Arnhem and Enschede, The Netherlands
CASE REPORT

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Increasing efficacy of endovascular recanalization with covered stent graft for TransAtlantic Inter-Society Consensus II D aortoiliac complex occlusion

Daniele Psacharopulo, MD, Emanuele Ferrero, MD, Michelangelo Ferri, MD, Andrea Viazzo, MD, Sandeep Singh Bahia, MBBS, Andrea Trucco, MD, Fulvio Ricceri, MD, and Franco Nessi, MD, Turin, Italy; and London, United Kingdom

<table>
<thead>
<tr>
<th>Variable</th>
<th>EVR group (n = 22)</th>
<th>OSR group (n = 21)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean ± SD years</td>
<td>64.2 ± 8.1</td>
<td>67 ± 6.4</td>
<td>.27</td>
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<tr>
<td>Gender, No.</td>
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<td></td>
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<tr>
<td>Male</td>
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<td>.40</td>
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<tr>
<td>Female</td>
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<td>6</td>
<td>.40</td>
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<tr>
<td>Hypertension, No.</td>
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<td>19</td>
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<tr>
<td>Diabetes, No.</td>
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<td>.07</td>
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<td>Coronary artery disease, No.</td>
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<td>2</td>
<td>.41</td>
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<tr>
<td>Renal failure, No.</td>
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<td>Hyperlipidemia, No.</td>
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<td>Smoking, No.</td>
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<td>.17</td>
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<td>Rutherford stage, No.</td>
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<td></td>
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<tr>
<td>III</td>
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<td>15</td>
<td>.29</td>
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<td>IV</td>
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</tr>
<tr>
<td>V</td>
<td>2</td>
<td>1</td>
<td>.29</td>
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<tr>
<td>Occlusion, No.</td>
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<td></td>
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<tr>
<td>Proximal aortoiliac</td>
<td>7</td>
<td>11</td>
<td>.14</td>
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<td>Distal aortoiliac</td>
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<td>4</td>
<td>.55</td>
</tr>
<tr>
<td>Common and external</td>
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<td>6</td>
<td>.13</td>
</tr>
<tr>
<td>Unilateral iliac</td>
<td>8</td>
<td>9</td>
<td>.66</td>
</tr>
</tbody>
</table>

SD: Standard deviation; SFA: superficial femoral artery.
*Defined as patients with elevated serum creatinine concentration >1.5 mg/dL.
*Defined as patients with elevated plasma lipids or under medical treatment.

The average hospital length of stay was shorter for patients treated with EVR (3.9 ± 2.2 days) vs OSR (5.8 ± 3.1 days; P = .03). The complication rate was 4% for EVR vs 18% for OSR (P = .32).
Durability of the balloon-expandable covered versus bare-metal stents in the Covered versus Balloon Expandable Stent Trial (COBEST) for the treatment of aortoiliac occlusive disease

Bibombe P. Mwipatayi, MMed (Surg), FCS (SA), FRACS, a,b Surabhi Sharma, MBBS, a
Ali Daneshmand, MD, a Shannon D. Thomas, BMedSc, FRACS, c,d Vikram Vijayan, MRCS, FRCS, e
Nishath Altaf, PhD, FRCS, f Marek Garbowski, MB BS, FRACS, f and Mark Jackson, MD, FRACS, f on behalf of the COBEST co-investigators, * Perth, Sydney, and Queensland, Australia; and Singapore

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TASC B

TASC C-D
Editor’s Choice — Outcomes of Self Expanding PTFE Covered Stent Versus Bare Metal Stent for Chronic Iliac Artery Occlusion in Matched Cohorts Using Propensity Score Modelling

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Vascular and Endovascular Surgery Clinic, Padova University, School of Medicine, Padua, Italy

Eur J Vasc Endovasc Surg (2017) 54, 177—185

Overall Primary Patency

TASC D

N. At risk

BMS: 48 35 32 27 19 14
CS: 70 50 37 24 17 13

N. At Risk

BMS: 23 20 16 12 10 8*
CS: 47 35 19 12 11 10

P=.08

P=.02

83.5%
70%
86.2%
63.9%
52.2%
Overall the use of CS for aorto-iliac lesions (TASC B, C and D) appear to have similar early and mid-term outcomes compared to BMS.

However, when considering TASC C-D lesions, BMS is a strong negative predictor of patency and CS has significantly better patency rate during mid-term follow-up.

For this reasons, in this subset of TASC C-D lesions, CS should be considered as the primary line of treatment.

Viabahn in term of both results and conformability in our experience is the stent graft of choice.
INTRODUCTION
Previous experiences demonstrated a freedom of binary restenosis > 90% at 1 year when CS was used. In 2011 the COBE Stentulcme entered a randomized trial in acute and chronic disease at 18 months in favor of CS compared to BM in TASC C and D lesions. In the world practice the use of covered or uncovered stents in severe iliac disease is strictly related not only to the TASC classes but also to the technical and biological factors.