Self Expanding and Balloon expandable Gore endoprosthesis for endovascular repair of severe atherosclerotic aorto-iliac disease

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Disclosure

Speaker name:
MICHELE PIAZZA

I have the following potential conflicts of interest to report:
Consulting agreements W.L. Gore & Associates *

*all consulting fees paid to the Dept. of Cardiac Thoracic Vascular Sciences, University of Padua.
SEVERE AORTO-ILIAC OCCLUSIVE DISEASE

✓ TASC C and D
✓ Lesion quality (Calcification...)
✓ Vessels tortuosity, angulations
✓ Aortic bifurcation quality
✓ Prox and distal disease extension

INTRODUCTION
Previous experiences demonstrated a freedom of binary restenosis > 90% at 1 year when CS was used. In 2011 the COBE Stent intraluminal randomised trials demonstrated an increase in favor of CS compared to BMS in TASC C and D lesions. In the whole practice the use of covered or uncovered stents in severe iliac disease is strictly related not only to the TASC classification (C or D lesions) but also to the lesion quality, extent and laterality.
# STENT CHOICE: BARE METAL VS COVERED

## 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, FRCSE

## Covered versus bare metal kissing stents for reconstruction of the aortic bifurcation in the ILIACS registry

Francesco Squizzato, MD, Michele Piazza, MD, Raffaele Puliti, MD, Aaron Fargion, MD, Gabriele Piffaretto, MD, PhD, Carlo Pratesi, MD, Franco Grego, MD, and Michele Antonello, MD, PhD, on behalf of the ILIACS Registry Group, Padua, Bari, Firenze, and Varese, Italy

## 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
COVERED STENTS: GORE PLATFORM

VIABAHN® VBX
BALLOON EXPANDABLE ENDOPROSTHESIS

VIABAHN® ENDOProSTHESIS

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VBX

- Precision
- High radial force
- Variable length range
- 7 – 8 F size

- CONFORMABILITY (MOLDING IN DIFFERENT SEGMENTS)
- ADAPTABILITY (TO TORTUOSITY)
- PUSHABILITY (STENT RETENTION IN ITS OWN BALLOON)
- FLEXIBILITY (LONG LENGTH RANGE)
VBX

VIABAHN®

VBX

BALLOON EXPANDABLE ENDOPROSTHESIS

Crimped

Nominal Inflation

Foreshortening

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VBX: PRECISION

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VBX: RADIAL FORCE KISSING STENTS
Covered versus Bare-metal Stent in the Kissing Reconstruction of the Aortic Bifurcation: Analysis from ILIACS registry

On behalf of the ILIACS registry group investigators

JVS 2021
KISSING BM STENT RELINING
The First Balloon-Expandable Stent-Graft Approved for Treatment of Iliac Occlusive Disease

Journal of Endovascular Therapy

Michele Piazza, MD¹, and Michele Antonello, MD¹

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VBX: KISSING STENTS
VBX: Kissing stents aortic bifurcation reconstruction
VBX CONFORMABILITY
GEOMETRICAL ANALYSIS

Protrusion mismatch:
Precision of deployment, defined as the longitudinal mismatch of the stents’ proximal ends at the level of the infrarenal aorta.

Radial mismatch:
Discrepancy between the stented lumen and the vessel lumen after stent placement was measured as both the “gutter” area and volume between the aortic wall and the two kissing stents.

Stent conformation:
Defines as the ratio between the major and minor axes (D-ratio) of each stent in the axial view; ratios higher than 1 indicate a more elliptical (or “D”) shape, rather than a circular (“O”) shape. Stents symmetry was measured as the ratio between the minor diameter of the two kissing stents at the same level; a symmetry ratio of 1 indicates a symmetrical kissing stents configuration, without compression of one stent by the contralateral one.

Geometrical Analysis and Preliminary Results for the Endovascular Reconstruction of Aortic Bifurcation Using New-Generation Balloon-Expandable Covered Stents in the Kissing Conformation

Michele Piazza 1, Francesco Squizzato 2, Gianna Saviane 1, Franco Grego 1, Michele Antonello 1
GEOMETRY of AORTIC RECONSTRUCTION

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean±SD</th>
<th>Median (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protrusion mismatch, mm</td>
<td>0.8±1.7</td>
<td>0 (0-5)</td>
</tr>
<tr>
<td>Radial mismatch area, mm²</td>
<td>20.4±10.6</td>
<td>20 (3-40)</td>
</tr>
<tr>
<td>Radial mismatch volume, mm³</td>
<td>2442±182</td>
<td>2200 (50-5600)</td>
</tr>
<tr>
<td>D-ratio</td>
<td>1.4±0.2</td>
<td>1 (1-1.4)</td>
</tr>
<tr>
<td>Mean major diameter, mm</td>
<td>10.9±1.6</td>
<td></td>
</tr>
<tr>
<td>Mean minor diameter, mm</td>
<td>8.1±1.3</td>
<td></td>
</tr>
<tr>
<td>Stent symmetry ratio</td>
<td>1±0</td>
<td></td>
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</tbody>
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SELF EXPANDING (VIABAHN)

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**Outcomes of Self-Expanding Covered Stents for the Treatment of External ILIAC Artery Obstructive Disease**

Francesco Squizzato¹ · Vicente Mosquera-Rey² · Amer Zanabili Al-Sibbai¹ · Lino Antonio Camblor Santervas² · Edoardo Pasqui³ · Giancarlo Palasciano³ · Gianmarco de Donato³ · Manuel Alonso Pérez² · Michele Antonello¹ · Michele Piazza¹

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ADAPTABILITY TO ANGULATIONS AND TORTUOSITY
(Viabahn for external iliac artery)
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

TASC D : CIA+EIA
LONG LESIONS
CONCLUSIONS

The Gore platform of SE (Viabahn) and BE (VBX) endoprosthesis allow for a wide range of treatment in case of severe obstructive aorto-iliac lesions.

VBX (BE) in kissing fashion for aortic bifurcation reconstruction, thanks to its conformability, allow perfect geometrical adaption to aortic and iliacs wall.

Viabahn (SE) thanks to its adaptability in case of tortuosity seems to guarantee excellent long term patency in case of severe external iliac obstructive lesions.

In case of long segment lesions (CIA+EIA), the Association of VBX at the aortic bifurcation/CIA + Viabahn in the external artery allow perfect endovascular reconstruction.
THANKS FOR YOUR ATTENTION
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