Flash presentation:
Management of severe TASC C-D aortoiliac disease

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Italy
Conflicts of interest

Speaker’s name: Gianmarco de Donato

x I have the following potential conflicts of interest to report:

- Research contracts
- Travel & educational grants (Endologix, Gore, Penumbra)
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

☑ I do not have any potential conflict of interest
How should we treat....

According to TASC II recommendations....

<table>
<thead>
<tr>
<th>Type A</th>
<th>Type B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endovascular treatment of choice</td>
<td>Currently, endovascular treatment is more often used but insufficient evidence for recommendation</td>
</tr>
<tr>
<td>&lt;3 cm</td>
<td>3-10 cm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type C</th>
<th>Type D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently, surgery treatment is more often used but insufficient evidence for recommendation</td>
<td>Surgical treatment of choice</td>
</tr>
<tr>
<td>5-10 cm</td>
<td>3-5 cm</td>
</tr>
</tbody>
</table>

TASC II. EJVES 2007
### 2017 ESC Guidelines on the Diagnosis and Treatment of Peripheral Arterial Diseases, in collaboration with the European Society for Vascular Surgery (ESVS)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Class&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Level&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>An endovascular-first strategy is recommended for short (i.e. &lt;5 cm) occlusive lesions.</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>In patients fit for surgery, aorto-(bi)femoral bypass should be considered in aorto-iliac occlusions.</td>
<td>IIa</td>
<td>B</td>
</tr>
<tr>
<td>An endovascular-first strategy should be considered in long and/or bilateral lesions in patients with severe comorbidities.</td>
<td>IIa</td>
<td>B</td>
</tr>
<tr>
<td>An endovascular-first strategy may be considered for aorto-iliac occlusive lesions if done by an experienced team and if it does not compromise subsequent surgical options.</td>
<td>IIb</td>
<td>B</td>
</tr>
<tr>
<td>Primary stent implantation rather than provisional stenting should be considered.</td>
<td>IIa</td>
<td>B</td>
</tr>
<tr>
<td>Open surgery should be considered in fit patients with an aortic occlusion extending up to the renal arteries.</td>
<td>IIa</td>
<td>C</td>
</tr>
<tr>
<td>In the case of ilio-femoral occlusive lesions, a hybrid procedure combining iliac stenting and femoral endarterectomy or bypass should be considered.</td>
<td>IIa</td>
<td>C</td>
</tr>
<tr>
<td>Extra-anatomical bypass may be indicated for patients with no other alternatives for revascularization.</td>
<td>IIb</td>
<td>C</td>
</tr>
</tbody>
</table>

<sup>a</sup> Class of recommendation.

<sup>b</sup> Level of evidence.

<sup>c</sup> These recommendations apply for patients with intermittent claudication and severe chronic limb ischaemia.
Global Vascular Guidelines on the Management of Chronic Limb-Threatening Ischemia

Michael S. Conte, MD, Co-Editor a, Andrew W. John V. White, MD, Steering Committee d, Florian Joseph L. Mills, MD, Steering Committee e, Jean Kalkunte R. Suresh, MD, Steering Committee i, Nikolai Vlad-Adrian Alexandrescu m, David Armstrong n, Nabil Chafé s, Stephen Cheng t, Joseph Dawson, Roberto Ferraresi z, Raghvinder Gambhir aa, Mauricio Prem C. Gupta ag, Robert Hinchliffe ah, Prasad Jetty j, Matthew Menard an, Sanjay Misra ao, Tetsuro Miyazaki k, Juan E. Paolini at, Manesh Patel au, Frank Pomposelli bv, Peter Schneider ba, Spence Taylor bb, Melina V. Boudiaff b, Shenming Wang bf: GVG Writing Group for the Journal of Vascular Surgery (ESVS), and World Federation of Societies of Ultrasound in Medicine and Biology. 

6.25 Use an endovascular-first approach for treatment of CLTI patients with moderate to severe (eg, GLASS stage IA) AI disease, depending on the history of prior intervention.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Level of evidence</th>
<th>Key references</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Strong)</td>
<td>B (Moderate)</td>
<td>Jongkind, 82 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ye, 83 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deloose, 84 2017</td>
</tr>
</tbody>
</table>

6.26 Consider surgical reconstruction for the treatment of average-risk CLTI patients with extensive (eg, GLASS stage II) AI disease or after failed endovascular intervention.

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<thead>
<tr>
<th>Grade</th>
<th>Level of evidence</th>
<th>Key references</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 (Weak)</td>
<td>C (Low)</td>
<td>Ricco, 85 2008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chiu, 86 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indes, 87 2013</td>
</tr>
</tbody>
</table>
BRAVISSIMO study

(Physician initiated multi-center Belgian-Italian trial investigating Abbott Vascular Iliac Stents in the treatment of TASC A, B, C & D iliac lesions)

Omnilink Elite balloon-expandable stent

Absolute Pro self-expanding nitinol stent

325 patients
BRAVISSIMO study – Primary patency at 2 years

TASC A = 88.0%
TASC B = 88.5%
TASC C = 91.9%
TASC D = 83.1%

p=>0.05

Complex iliac occlusive disease: 
be aware of potential complication
Complex iliac occlusive disease: treatment with BMS

Artery rupture after bare metal stenting
Complex iliac occlusive disease:
be aware of potential complication

Viabahn 9/50
Covered stents higher midterm patency rates than BMSs for TASC D lesions:
- total lesion length 6 cm,
- occlusion length > 3.5 cm,
- calcification > 75% of the arterial wall circumference.
Complex iliac occlusive disease: Treatment with covered stent grafts

- Long iliac occlusion
- Aorto-iliac occlusion
- Endograft occlusion
Long iliac occlusion

- Pre-op planning
• Pre-op planning
Antegrade recanalization
A thin fluoropolymer/elastomer film covers the percutaneous balloon on the delivery catheter to ensure stent-graft retention during tracking and balloon inflation.

Crossing the occlusion
(without pre-dilatation)

Trackable delivery system (retention)
Stent deployment: Accuracy (compliance cards) - length

8 mm x 79 mm (8 Fr)

Viabahn SE 7/100

VBX 7/79

VBX 7/59
Long iliac occlusion

- Combination of BE & SE covered stent (occasionally, semi-covered stent to preserve hypogastric)
Complex iliac occlusive disease: Treatment with covered stent grafts

- Long iliac occlusion
- Aorto-iliac occlusion
- Endograft occlusion
Aorto-iliac occlusive lesions

Aortic bifurcation

Infrarenal aorta

Juxtarenal aorta
Aorto-iliac configuration

- CERAB
- Kissing covered stent
Leriche Syndrome – endovascular tx

1. Antegrade recanalization (brachial access)
2. GW rendez-vous at CFA
3. Kissing covered stents (femoral access)
1. Antegrade recanalization, percutaneous brachial access (5F sheath, 90cm)
2. CFA puncture under fluoroscopy

& GW rendez-vous
Aorto-iliac occlusive disease – endovascular tx

3. Kissing stents

Viabahn (SE and BX)

Tigris

CBAS Heparin Surface for lasting thromboresistence
Aorto-iliac endovascular recanalization with IMA preservation
Complex iliac occlusive disease:  
Treatment with covered stent grafts

• Long iliac occlusion
• Aorto-iliac occlusion
• Endograft occlusion
Case presentation

- 82 years-old man
- CABG, COPD, surgery for gastric cancer, intracerebral hemorrhage (minor stroke)

Unfit for open conversion

Endovascular relining with covered BX stents

May 2017
August 2018
Antegrade recanalization (brachial access)
Relining by kissing covered stent & renal chimney
Relining – double renal chimney
5 month-follow-up
Relining – proximal landing

Distal landing

independent stainless steel rings connected via fluoropolymer graft material (only stent-graft with no longitudinal stent struts)

VBX
* Radial strength
* Flexibility
Conclusion
Complex iliac occlusive disease

Endo first line for all aorto- iliac lesion by covered stents

Keys for success:
- pre-op planning
- correct technique
- correct materials (covered BE & SE stents)

... same paradigm shift from open to endo that we have seen for AAA
Piazza del Campo, Siena – Italy
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