Is co-existing hypogastric aneurysm a contradiction for the treatment with iliac branched device? Insights from the European PELVIS registry, experience of 9 centers

KP Donas, G. Torsello MD on behalf of the pELVIS Registry collaborators
Disclosure

Speaker name:

......K. Donas.................................................................................................

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
Preserving the hypogastric artery

Surgical versus endovascular repair by iliac branch device for aortoiliac aneurysms involving the iliac bifurcation: a randomized study

Use of Iliac Branch Devices for Endovascular Repair of Aneurysmal Distal Seal Zones After EVAR

Long-term Results of Iliac Aneurysm Repair with Iliac Branched Endograft: A 5-Year Experience on 100 Consecutive Cases

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b Unit of Vascular Surgery, Hospital S. Camillo-Forlanini, Rome, Italy
Morphological score from IBD-IFU and IBD publications up to 2010

The most common limitation for IBD was an aneurysmal hypogastric artery (AHA)

No robust conclusions due to limited number of patients treated by IBDDs and having AHA
Surgical versus endovascular repair by iliac branch device of aneurysms involving the iliac bifurcation

Konstantinos P. Donas, MD, PhD, Giovanni Torsello, MD, PhD, Georgios A. Pitoulias, MD, PhD, Martin Austermann, MD, PhD, and Dimitrios K. Papadimitriou, MD, PhD, Münster, Germany; and Thessaloniki, Greece (J Vasc Surg 2011;53:1223-9.)

Austermann JVS 2013 15 pat. Noel-Lamy EJVES 2015 15 pat

**Dislocation** of the bridging covered stents, hemorrhagic shock and fistula with the rectum
St. Franziskus Hospital
University of Münster
University of Leipzig
San Camillo Forlanini Hospital
University of Perugia
University of Rome Tor Vergata
University of Florence
University of Hamburg
University of Lille Chru
The pELVIS Registry
Secondary Procedures Following Iliac Branch Device Treatment of Aneurysms Involving the Iliac Bifurcation: The pELVIS Registry

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Multicenter European Registry including 9 centers and 814 patients treated by 910 iliac side branched devices between January 2005-April 2017
pELVIS Registry

Safety and effectiveness of IBDs in co-existing hypogastric aneurysms?
pELVIS Registry

910 deployed IBDs

315 (34.6%) for hypogastric aneurysms
Patency of IBD

"ON" vs "OFF LABEL" (IIA > 12mm)

Cumulative IBD Patency

Log-rank (Mantel-Cox) test, p = .405

94% vs 94%
Freedom from endoleak type I

"ON" vs "OFF LABEL" (IIA > 12mm)

Cumulative freedom from IBD related Type I Endoleak

- IIA < 12mm
- IIA > 12mm
censored
censored

Log-rank (Mantel-Cox) test, p=.006

Cumulative Freedom from Endoleak T-I at 5 years: 98% vs 93% respectively
HA group showed significantly more pelvic ischemia

<table>
<thead>
<tr>
<th></th>
<th>HA</th>
<th>Non-HA</th>
<th>p</th>
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<tbody>
<tr>
<td>Pelvic ischemia</td>
<td>2.7 %</td>
<td>6.4 %</td>
<td>.011</td>
</tr>
<tr>
<td>- Buttock claudication</td>
<td>2.2 %</td>
<td>5.3%</td>
<td>.019</td>
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</tbody>
</table>
Subgroup Analysis for Patients with HAs

Cumulative IBD Patency

Log-rank (Mantel-Cox) test, p=0.036

5 years IBD Patency
90% vs 99% respectively
### Single vs. Multiple Stenting

<table>
<thead>
<tr>
<th>Condition</th>
<th>Single</th>
<th>Multiple</th>
<th>p</th>
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<tbody>
<tr>
<td>Buttock claudication</td>
<td>6.7 %</td>
<td>1.4 %</td>
<td>.038</td>
</tr>
<tr>
<td>IBD-related type I Endoleak</td>
<td>5.6 %</td>
<td>0%</td>
<td>.003</td>
</tr>
</tbody>
</table>
Conclusions

Coexisting hypogastric aneurysm is associated with higher rate of type IA endoleaks

Need for sufficient distal landing zone in the posterior trunk of the hypogastric artery
Münster approach

Combination of balloon- with self-expandable covered stents