Clinical results and technical learnings in challenging iliac aneurysmatic disease

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Disclosure

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

☒ Consulting/Proctor: Gore, Medtronic, Terumo, Jotec, Lombard, Logimed
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☐ I do not have any potential conflict of interest
Clinical results and technical learnings in challenging iliac aneurysmatic disease

- Optimize the placement of the stent graft
- Maximize seal length
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EVAR & Hipogastric Preservation

**Clinical results and technical learnings in challenging iliac aneurysmatic disease**

**EVAR & Hipogastric Preservation**

<table>
<thead>
<tr>
<th>Recommendation 104</th>
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<tbody>
<tr>
<td>Preserving blood flow to at least one internal iliac artery during open surgical and endovascular repair of iliac artery aneurysms is recommended</td>
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**Table: Class, Level, References**

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<td>1</td>
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<td>6681</td>
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**Recommendation 108**

In patients where internal iliac artery emboilisation or ligation is necessary, occlusion of the proximal main stem of the vessel is recommended if technically feasible, to preserve distal collateral circulation to the pelvis

**Table: Class, Level, References**

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**EVAR. We recommend preservation of flow to at least one internal iliac artery.**

**We recommend using Food and Drug Administration (FDA)-approved branch endograft devices in anatomically suitable patients to maintain perfusion to at least one internal iliac artery.**

**Table: Level of recommendation, Quality of evidence**

<table>
<thead>
<tr>
<th>Level of recommendation</th>
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Gore Excluder Iliac Branch Endoprosthesis

THE US: Iliac Branch and Internal Iliac Components. The GORE® EXCLUDER® Iliac Branch Endoprosthesis is indicated for use with the Endoprosthesis to isolate the common iliac artery from systemic blood flow and preserve blood flow in the external iliac and internal iliac arteries in an aneurysm, who have appropriate anatomy, including adequate iliac/femoral access: minimum common iliac diameter of 17 mm; iliac arterial to common femoral artery diameter range of 6.5–25 mm and seal zone length of at least 10 mm; iliac artery 8.5–12.5 mm; and seal zone length of at least 10 mm; adequate length from the lowest major renal artery to the internal iliac artery to accommodate the branch component in the minimum length of required components, taking into account appropriate overlaps between segments. The GORE EXCLUDER® Iliac Branch Endoprosthesis is contraindicated in patients with known sensitivities or allergies to the materials of the GORE EXCLUDER® Iliac Branch Endoprosthesis and the GORE® EXCLUDER® AAA Endoprosthesis contain ePTFE, FEP, nitinol. Patients with a systemic infection who may be at increased risk of endovascular graft infection. Refer to Instructions for Use at skele description of all warnings, precautions and adverse events.
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GALICIAN IBE REGISTRY

JANUARY 2014 – MAY 2019

105 ILIAC ARTERIES treated with IBE implant (81 patients)

Primary technical success: 99,04% cases (104/105)

- 3 reinterventions
  - 2 related with the IBE
  - No migrations

2 internal iliac component occlusion
(first CT scan - asymptomatic)
97% patency
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CONTRAINDICATIONS FOR HIPOGASTRIC COMPONENT (HGB)

1. No Good hipogastric landing zone for the HGB

2. Not enough length from the lowest renal (Short hypogastric)

3. Previous EVAR
1. No good hipogastric landing zone for the HGB

**GALICIAN IBE REGISTRY**

**JANUARY 2014 – MAY 2019**

105 ILIAC ARTERIES treated with IBE implant (81 patients)

**Aneurysmal sectors**

- Common iliac 17%
- Aortic + Common iliac 60%
- Aortic +/- iliac + Hypogastric 11.5%
- Aortic + iliac 2.9%
- Isolated hypogastric 2.9%

**HYPOGASTRIC EXTENSION:**

- 19 cases need extension to internal iliac. (18.09%)
- 10 cases extension distal to hipogastric artery (9.5%)
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CONTRAINDICATIONS FOR HIPOGASTRIC COMPONENT (HGB)

DEVICE SELECTION
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1. No good hipogastric landing zone for the HGB

DISTAL HIPOGASTRIC EXTENSION

IIA ANEURYSM ONE BAD GLUTEAL ARTERY FROM THE DISTAL ARTERY

IIA ANEURYSM BAD GLUTEAL ARTERIES
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1. No good hipogastric landing zone for the HGB

Outcomes of the Gore Excluder Iliac Branch Endoprosthesis Using Division as Distal Landing Zones

Mario O’Roria, MD, Emanuel R. Tenorio, MD, Paul S. Oderich, MD, Bernardo C. Menasché, MD, Marjui Rairó, MD, Faqah Shujie, MD, and Randall R. DeMartino, MD

Clinical Investigation

Among the 231 patients with iliac aneurysms who had an iliac access sheath placed in the iliac artery (IA) and received an IBE, 211 had a distal landing zone in the external iliac artery (EIA) or common iliac artery (CIA) within adequate distance from the origin of the hypogastric arteries. The overall technical success rate was 97%, with 1 technical failure per group (p=0.43). No significant differences were seen in the rates of 30-day MACE (7% vs 12%, p=0.33) or major access complications (9% vs 11%, p=0.99) for patients receiving distal landing in the main trunk vs division branch, respectively. The mean follow-up for the entire cohort was 12±12 months. The overall 1-year survival rate was 94% (95% CI 74% to 99%). The primary and secondary patency rates at 1 year were 98% (95% CI 86% to 99%) vs 95% (95% CI 72% to 99%) vs 98% (95% CI 86% to 99%) vs 102% (p=0.43) for the main trunk vs division branch groups, respectively. Freedom from IA branch instability estimates were also similar: 1-year follow-up [95% CI 5% to 97%] vs 90% (95% CI 66% to 97%) vs 97% (p=0.29) vs the freedom from new-onset renal ischemia classification estimates [96% (95% CI 86% to 99%) and 94% (95% CI 67% to 99%), respectively (p=0.43). Mean sac diameter change was 5.4±5.3 mm, not significantly different between the groups (p=0.83). Conclusion: Use of the posterior or anterior division of the IIA as a distal landing zone for the Gore Excluder IBE was safe and efficacious in the midterm. This technique may permit extending indications for endovascular repair of aortoiliac aneurysms to cases with unsuitable anatomy within the IIA main trunk. Long-term assessment is needed to affirm the efficacy of this technique.
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1. No good hipogastric landing zone for the HGB

DISTAL HIPOGASTRIC EXTENSION

- SHORT IIA GOOD GLUTEAL ARTERIES
- IIA ANEURYSM GOOD GLUTEAL ARTERIES
- IIA ANEURYSM ONE BAD GLUTEAL ARTERY FROM THE SAC
- IIA ANEURYSM ONE BAD GLUTEAL ARTERY FROM THE DISTAL ARTERY
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1. No good hipogastric landing zone for the HGB

DISTAL HIPOGASTRIC EXTENSION

Hypogastric component sealing zone

Distal graft: connecting to gluteal artery

Area calculation: \( \pi r^2 = \pi \sqrt{a^2} + \pi \sqrt{b^2} + \pi \sqrt{c^2} \)

SHORT IIA GOOD GLUTEAL ARTERIES

IIA ANEURYSM GOOD GLUTEAL ARTERIES
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1. No good hipogastric landing zone for the HGB

- 73 yo male
- MI
- Left Hemicolecotomy
- Distal pulses
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2. Not enough length from the lowest renal
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3. Previous EVAR

DEVICE SELECTION
Maintain the hipogastric patency seems mandatory

Good sealing zone is necessary for the durability

Good Sizing & Planning are essential

Choose the correct devices is key (Don’t Fight against the anatomy)

Combination of Gore devices increase the number of patients that can be treated SAFETILY with the IBE

TAKE HOME MESSAGE

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THANK YOU!!!!