Multicentric European experience with the GORE IBE device for co-existing hypogastric aneurysms

Konstantinos Donas, on behalf of the Hyprotect collaborators

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Disclosure

Speaker name:
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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
Elective treatment in **narrow** common iliac artery with non-aneurysmal internal iliac artery
Urgent treatment of a symptomatic >6cm ICA aneurysm
Coil embolization IIA and Placement of Endurant limb
Co-existent hypogastric aneurysm
Rupture of a 6 cm IIA aneurysm with dislocation of the bridging covered stents, hemorrhagic shock and fistula with the rectum
Coexisting hypogastric aneurysms worsen the outcomes of endovascular treatment by the iliac branch devices within the pELVIS Registry

Konstantinos P. Donas, MD, PhD, Gergana T. Taneva, MD, Georgios A. Pitolias, MD, PhD, Giovanni Torsello, MD, PhD, and Frank J. Veith, MD, PhD, on behalf of the pELVIS Registry collaborators, Münster, Germany, Thessaloniki, Greece, and New York, NY

ABSTRACT

Objective: Hypogastric aneurysms (HAs) frequently coexist with aortoiliac aneurysms (AIAs). However, the presence of an HA is a contraindication to endovascular aneurysm treatment by iliac branch devices (IBDs) because of the risk of distal sealing-related endoleaks. No robust evidence exists in the published literature, and therefore we sought to evaluate the performance of IBDs in the presence of HAs within a multicenter registry of nine vascular centers.

Methods: Clinical and radiographic information of 804 patients with AIAs treated by IBDs was retrospectively reviewed and analyzed using prearranged, defined, and documented protocols. The treatment period was between January 2005 and April 2017.

Results: HA was present in 315 (32.6%) of the overall 910 deployed IBDs. Mean radiologic follow-up was 32 months. The incidence of incomplete aneurysm exclusion and type I endoleak was 3% in the HA group vs 0.7% in the non-HA group (P = .019). The 5-year freedom from IBD-related type I endoleak was 93% vs 98% in the HA group vs the non-HA group, respectively (P = .006). Subgroup analysis of the HA group revealed that use of a single distal bridging stent graft vs multiple bridging devices led to higher rate of type I endoleak (9.6% vs 2.8%; P = .031), branch occlusions (8.3% vs 0.9%; P = .009), and buttock claudication (7.6% vs 1.9%; P = .038).

Conclusions: This series of AIAs with HAs is the largest reported. It shows that HAs coexisting with AIAs, when treated with IBDs, have significantly worse outcomes. Lengthening the distal landing zone with more than one bridging stent graft into the distal healthy hypogastric artery or one of its main branches improves outcomes. (J Vasc Surg 2019;69:1072-9.)

Keywords: Hypogastric aneurysms; Internal iliac artery; Iliac branch device; Bridging stent graft; Endovascular aneurysm repair
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Hypothesis: Treatment with GORE Excluder IBE can be also effective in case of co-existing hypogastric aneurysm?
Why Gore Excluder?

- Internal iliac dedicated component (HGB) ending in **10-12-14.5mm**

  *IFU diameter of IIA up to **13.5mm**!*

- Use of the balloon expandable Viabahn (VBX), being the only available BECS, in length also of **79mm**.
CASE EXAMPLE:
Pat. with bilateral internal iliac aneurysms
One side: No proximal neck needed to be extended infrarenaly

Combination HGB and VBX
Contralateral hypogastric aneurysm with proximal neck

8mmx79mm VBX
HYPROTECT STUDY

• Aim: Existence of dedicated devices for the IIA can lead to better outcomes for patients with co-existing IIA aneurysms treated by IBE?

• Multicentric pan-european retrospective analysis

• 2-arm study;
  (Group A: with co-existing IIA aneurysm, Group B: without IIA aneurysm)

• Endpoints: type I/III endoleaks, patency of the IIA, sac regression of the IIA
HYPROTECT STUDY: 22 Centers > 481 patients
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179 cases (37%) with hypogastric and 62 of them with bilateral hypogastric aneurysm

Branch instability
(occlusion or kinking or disconnection or I/III endoleak or rupture)
38 cases, 7.9%
HYPROTECT STUDY: 22 Centers > 481 patients

Further evaluation and statistical analysis are on going.

Goal is to present the data at ESVS Meeting September 2023
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