Indication for inferior mesenteric artery chimney procedure:
Synchronous AAA, mesenteric ischemia and peripheral artery disease

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Disclosure

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I have the following potential conflicts of interest to report:

☐ Travel expenses (Medtronic)
Introduction

- Multi-level atherosclerosis increase morbidity and make therapeutic procedure challenging.

- We describe the totally endovascular therapy in a high-risk patient who presented with chronic mesenteric ischemia, aortoiliac occlusive disease and rapid expansion of his AAA.
Case report

- 65-year-old man
- postprandial pain
- weight loss

**Medical history:**
- Arterial hypertension
- CAD (CABG x3 2003)
- PAD (kissing stents 2008)
- AAA <5cm (2017)
- CKD stage 4
Ia DSA

- severely stenosed coeliac artery
- occluded SMA
- Riolan’s arch from enlarged IMA
PTA + Stent coeliac artery
4 months later….

- hematemesis
- new myocardial infarction during hospitalization
- hemodialysis program
- lower extremity rest pain (during hemodialysis)

→ A new CT scan revealed expansion of his AAA (max diameter 5,5cm) and an in-stent restenosis of iliac limbs.
Preoperative planning: Preserve IMA (chimney technique)

Gore Excluder
L 31X14.5X150
RT 16X12X100

Gore Viabahn
8X150

Oversize > 25%
1\textsuperscript{st} step: to achieve bilateral access
PTA Iliacs / Kissing
2nd step : IMA cannulation
(Brachial access)

Cannulation of IMA
Arrow 7f - Amplatz 0.035

Gore Viabahn 8X150 deployed
3rd step: Introduction of Gore Excluder aortic graft

- Contralateral limb cannulation
- Kissing balloon
Follow up: 3 months and 1 year
Discussion

- AAA, AIOD, chronic mesenteric ischemia
- Already in hemodialysis program
- High risk patient

IMA preservation was mandatory
Renal arteries preservation was not
Open surgical repair was not an option
In which cases this technique seems to be useful?

EVAR/CERAB cases with risk for bowel ischemia

Such as

- bilateral occlusion of hypogastric artery
- occluded SMA or atherosclerotic coeliac artery
Conclusion

• Endovascular techniques can provide therapy even in the most daedal cases

• Chimney technique offers minimally invasive preservation of IMA in patients undergoing EVAR.