Type Ib – Decision making, treatment, tips & tricks

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Disclosures

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I have the following potential conflicts of interest to report:

- [x] Consulting
- □ Employment in industry
- □ Stockholder of a healthcare company
- □ Owner of a healthcare company
- [x] Other(s)

□ I do not have any potential conflict of interest
Type Ib endoleak

- **SVS guidelines**: a type I endoleak is linked to a continued risk of rupture
- The **incidence** of type Ib endoleak is not well defined
- There are **no clear recommendations** about the best treatment strategies

Bisdas et al. JEVt 2014; Massoni et al. Vascular 2017
Aneurysmatic degeneration of CIA

- The aneurysmatic disease extends into the CIA in 25% of AAA patients > 65 yrs
- In 7% of these patients HA is involved
- Falkensammer et al: > 2mm CIA-expansion in 26% of EVAR patients @ 44 months

Norman et al. Circulation 2010; Falkensammer et al. JEVT 2007
Risk factors for type Ib EL

- IMPLANTATION OUTSIDE IFU (LENGTH AND OVERSIZING)
- DIAMETER > 24mm
- ANGULATION OF THE ILIAC AXIS (TI>1.2)
- CIA DIAMETER: 26-28mm

It is recommended that the blood flow should be preserved to at least one hypogastric artery in the course of EVAR (ESVS, SVS guidelines)
Treatment options

- HA embolisation + extension
- Sandwich technique
- Open surgical
- Iliac side branch devices
Coil embolization of the HA

**Type of Exclusion**
- Overall: 30%
- Coverage: 24%
- Plug: 13%
- Coils: 12%

**Location of Exclusion**
- Proximal: 30%
- Distal: 27%

**Side of Exclusion**
- Unilateral: 27%
- Bilateral: 27%

**Buttock claudication**
- Proximal: 4%
- Distal: 22%

**Erectile dysfunction**
- Proximal: 9%
- Distal: 0.10%

**Gluteal necrosis**
- Proximal: 0%
- Distal: 0.10%
Coil embolization for type Ib EL

EXTENSION + COIL EMBOLISATION OF THE HA

Buttock claudication: 14%
Recurrence: 6%

COIL EMBOLISATION OF THE EL WITHOUT EXTENSION

Recurrence: 25%
Sandwich technique

The sandwich technique to treat complex aortoiliac or isolated iliac aneurysms: Results of midterm follow-up

Armando C. Lobato, MD, PhD, and Luciana Camacho-Lobato, MD, PhD, São Paulo, Brazil

Technical success: 100%
Primary patency: 94%
HA occlusion: 8%
Open surgical procedure

End-to-end anastomosis

CFA-HA bypass
Iliac-side branch device for type Ib
Technical considerations

IBD in non-COOK devices

ETLW1616C82(93)EE
IBD for type Ib EL

N=18 consecutive patients
Type Ib EL after EVAR

Technical success: 100%
Primary patency HA @ 1year: 100%

Freedom from reintervention @ 1y: 83%
Technical considerations

Aneurysm of the hypogastric artery

Outcomes of a novel technique of endovascular repair of aneurysmal internal iliac arteries using iliac branch devices.

N = 21 branches
Advanta V12 + Viabahn + bare-metal stent

Primary patency @ 2y 95%
Proximal diameters of off-the-shelf IBD devices

12 mm

COOK

23 mm

GORE

14/16/18 mm

JOTEC
Conclusions

• Literature about type Ib EL is very scant
• There are different techniques to treat type Ib
• Extension to the EIA and embolisation of the HA is the most advocated technique
• Iliac side branch device is an effective strategy which preserves the HA and prevents associated adverse events
• Update of the recommendations is mandatory
Thank you!
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