Bolton Relay TEVAR Device
With A Proximal Scallop
As An Off-The-Shelf Device

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Disclosure
Speaker name: Jean-Marc ALSAC
- Speaker, Proctor and Consultant for educational training
  - ABS BOLTON Medical
  - GORE Medical
  - ENDOLOGIX
  - BARD

Total Endovascular Options ???

Branched Stentgrafts

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Parisian experience

- Sept 2012 - Nov 2016
- 22 consecutive patients (19♂, 74 ± 8 y-o)
- for TAA involving the arch:
  - 11 Sacciform TAA
  - 8 Fusiform TAA / 3 previous TEVAR + type I A endoleak
  - 3 Chronic Dissections (2 Mechanic valves)
- Follow-up by CTscans: 1 / 6 mo / 1 year

Materials

- Custom made Stentgraft: RELAY Plus ©
  - Proximal Bare stent with capture
  - Median diameter = 38 mm (34 to 46)
  - Median length = 150 mm (120 to 250)
  - 17 Tapered / 22 to 26 Fr
  - 12 Additional distal stentgrafts
    - Available within 3 weeks

Materials

- Nitinol Pre-curved Inner Catheter:
  - Tracking to the natural curvature of the arch
  - Enhances alignment
  - Orientates the scallop

Patients anatomy

Targeted proximal sealing zones

Zone 2: 3 patients
Zone 1: 17 patients
Zone 0: 2 patients

Results

- 100% implantation success
- Scallop position:
  - 3 LSA
  - 17 LCCA
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- Scallop position:
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  - 2 IA
- All targeted SAT patent
- No endoleak

Immediate

- 2 LCCA: Cervical inter-carotid bypasses
- 5 LSA: Cervical carotid-subclavian bypasses
- 4 LSA were occluded by vascular plug after coverage

Immediate

- 7 SAT adjuncts procedures (33%)
- median hospital stay = 5 days (3 - 11)
- 1 ischemic posterior stroke: (4.5%)
  - Zone 1 with left carotido-subclavian bypass + LSA embolization
- 1 death at D4 by fatal myocardial infarction: (4.5%)
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Post-operative course

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Long-term Follow-up

- Median follow-up = 29 months (1 - 45)
- No proximal endoleak
- Patency of all targeted SAT / No stroke
- 1 distal IB endoleak treated with extension

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Advantages of the Bolton Relay TEVAR Device With A Proximal Scallop

- Usefull to deal with **short necks** issues in the arch
- **Precise** and **Reproducible** deployment in the arch
- Avoid Debranching / Chimney / Branch procedures
- No canulation in the arch / No need to cross the valve
- **Safe and efficient** > 2 years outcomes
- Custom-made Available within 3 weeks

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An off-the-shelf device?

- Off the shelf scalloped stentgraft for acute aortic syndromes:
  - Traumatic injuries of thoracic aorta
  - Acute Type B dissections
  - Ruptured TAA

- Standardized proximal scallop (fits 95%)
  - Width = 18 mm
  - Length = 25 mm

= Anatomical study on SAT on 35 AAS

Larger experience

- French Multicentric Prospective Registry (REP)
  - 23 / 50 patients / 1 year Fup
  - Safe results at 6 months

- European retrospective study: 100 patients in 5 centers

Thank you for your attention...