Current status of Endovascular treatment of ascending aortic and arch lesions: experience with the Cook and Terumo Aortic arch branch devices and parallel grafts

Michael Jenkins
St Mary’s Hospital
Imperial College, London

Disclosures

- Terumo Aortic

Hostile domain

- Anatomically remote
- Tortuosity in multiple planes
- High flow rates
- Aortic valve, coronary ostia, carotid arteries
- Stroke risk

What can happen
Open surgical outcomes

- Unseen enemy
  - Subclinical TIA
  - Cognitive effect
  - Dementia

Endovascular Ascending options 2018

- Debranching
- Scallops/Fens

Endovascular Arch options 2018

- Chimneys
**Endovascular Arch options 2018**

**Branches**

**Evidence**

**Debranching**

- **Pros**
  - Off the shelf
  - Standard techniques
  - Good patency rates
  - Control of stroke

- **Cons**
  - Inelegant
  - Zone zero needs thoracotomy
  - Difficult in some anatomy

**Parallel grafts**

- **Pros**
  - Off the shelf
  - Good rescue strategy
  - Relatively straight forward

- **Cons**
  - Fundamental flaw
  - No CE mark
  - Stroke risk

**Custom branched stents**

- **Pros**
  - Most attractive
  - Sophisticated design
  - Early results encouraging

- **Cons**
  - Custom made – delay
  - Expensive
  - Technically demanding
  - Stroke risk
  - Results reproducible
  - More difficult in dissections
Conclusion

- Endovascular treatment into the arch is possible
- Device design has improved
- Many of the difficulties now appreciated
- Steep learning curve
- Stroke risk remains