Sandwich Graft Technique for Treating TAAA's: How to Make it Work Even In Urgent or Ruptured Cases

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Chimney Graft Technique

• “Chimney”
• “Double Barrel”
• “Snorkel”
• “Sandwich technique”

Number of Parallel Grafts

• It has been shown that more than two snorkel stents theoretically displaces the main body endograft too much or creates too large of a gutter, or both


The Effect of Number of Chimney Grafts (CG) on Main Graft Compression

Number of CG’s | Gutter Area (cm²) | Aorta Final Area (cm²) | Compression %
--- | --- | --- | ---
1 | 0.461 | 5.98 | 14.6
2 | 0.516 | 6.31 | 45.2
3 | 0.046 | 11.18 | 61.8
4 | 0.817 | 13.39 | 76.2


Disclosure

WL Gore – Consultant
Bolton Medical – SAB
Cook IDE for Fenestrated and Branch Grafts – no Financial benefit
Spectranetics – SAB
Abbott Medical – Speakers Panel

Collected World Experience About the Performance of the Snorkel/Chimney Endovascular Technique in the Treatment of Complex Aortic Pathologies: The PERICLES Registry
Donas, Konstantinos P. MD; Lee, Jason T. MD; Lachat, Mario MD; Torsello, Giovanni MD, PhD; Veith, Frank J. MD; on behalf of the PERICLES investigators
Mean follow up 17.1 ± 8.2 mo (1-70 mo)
- 30 d mortality 4.9% (25/517).
- 29 ruptures, 30d mortality 24.1 % (n=7)
- 3.7 % excluding ruptures
- 4 procedure related deaths
- 3 bowel ischemia, 1 graft infection
- 9 pts (1.7%) embolic stroke
- 41 pts (7.9%) type 1a endoleak
- 15 (2.9%) persisted despite corrective measures
- 13/15 resolved on subsequent imaging

History of Present Illness
- 67 year old male presented urgently with abdominal and back pain after using sexual enhancing medication
- PMH CAD, ED, CHF
- CTA revealed a type B thoracic dissection and large juxtarenal aneurysm
Intervention-I

- Angiogram
- IVUS
Intervention-II

- Left Carotid subclavian bypass
- Left subclavian artery embolization
- TEVAR
Intervention-III

- 4 vessel snorkels (double sandwich technique)
Postoperative Course

- Uneventful
- Discharge to rehab POD 4