Cook T-Branch Off-The-Shelf Branched Endograft System For TAAAs: Extending Its Applicability

Marcelo Ferreira

SITE – Serviço Integrado de Técnicas Endovasculares
Rio de Janeiro - Brasil

SIMPÓSIO AORTA RIO 2016
8 e 7 de maio Windsor Atlântica

Cook T-Branch Off-The-Shelf Branched Endograft System For TAAAs: Extending Its Applicability

Results

Between the years 2001 and 2010, 650 patients underwent endovascular aortic repair with branched or fenestrated devices.

Over 9 years of follow-up (mean [standard deviation], 3 [2.3] years), secondary procedures were performed for 0.6% of celiac, 4% of superior mesenteric artery (SMA), 6% of right renal artery, and 5% of left renal artery stents.

5-year freedom from branch intervention
30-day – 98%
1 year - 94%
5 years - 84%

Anatomic position of all “Side Branches”

Anatomi position of all “Side Branches”

JVS - 2008

Branched devices for thoracoabdominal aneurysm repair: Early experience.

Ferreira M1, Lanziotti L, Monteiro M.


Ferreira M, Lanziotti L, Monteiro M.

"First world experience with an "Off-the-Shelf" device"
- 03 cases done with devices from other patients.

J Endovasc Ther 2009;16:654–656
Why use an Off-the-Shelf device

- POTENTIAL DISADVANTAGES of a CMD Stent Graft
  - Waiting time for planning and import.
  - Risk of rupture ????
  - J. Coselli > 2,500 cases - only 9% emergencies !
  - Delay in insurances authorization ! More than 30 days !
  - Complexity of anatomy / New ideas or solutions requires prototypes.
  - Waiting time for clearing at the CUSTOMS.

In our experience with 823 open TAAA repairs from January 2005 through May 2012, the 30-day mortality rate was 4.7% (39 patients), and the rate of permanent paraplegia was 3.8% (31 patients). The mean age of the 823 patients was 63.4 ± 13.1 years.

The series included 75 emergent repairs (9.1%), 79 ruptured aneurysms (9.5%), 323 chronic dissections (39.1%), and 504 Crawford extent II repairs (32.1%), which are traditionally associated with the greatest risk of early death, spinal cord deficit, and renal failure.

Cook T-Branch Off-The-Shelf Branched Endograft System For TAAAs: Extending Its Applicability

Anatomy limitations
T-Branch Key Points

Key points !!

1. MEASURES OF BRANCH T
   - 202 cm total length.
   - 34 mm proximal diameter.
   - 18 mm distal diameter.
   - Seven centimeters from the End of the Kidney branches.

NOTE: LEAVE THE MINIMUM OF 3 CM BRANCH from the target artery

"Programming the T-Branch"

Conclusion

The applicability of the new T-branch device in our study cohort is very promising, with half of our patients suitable for implantation at present. By performing adjuvant procedures, the suitability could be expanded up to nearly two thirds of patients.

A challenge case TREATED WITH A MODIFIED T-BRANCH

T Branch modification
Making it shorter

Modification done
Intra-op view of the T-Branch in position

T-Branch experience
Expanding the indications
Chronic Dissection Aneurysm

Initial Aortography

T-Branch experience
Expanding the indications
Celiac and SMA cut
Cook T-Branch Off-The-Shelf Branched Endograft System For TAAAs: Extending Its Applicability

Comments on T-Branch - Personal Perspective

- The T-Branch device will replace the majority of CMD devices, especially in emergency situations.
- Our goal or expectation is to be able to cover about 70% to 90% of cases, depending on the surgeon’s experience.
- It can be considered a breakthrough in the endovascular treatment of TAAAs, although special cases with “hostile” Anatomy still require special CMD projects.
- First case in Brazil 08/19/2014.
- Total to date in Brazil: 64 operated cases by October 2015.