Endovascular Total Aortic Arch Repair using in situ Fenestration for the Treatment of Arch Aneurysm and Chronic type A Aortic Dissection

Iwaki City General Iwaki Kyouritsu Hospital
Department of Cardiovascular Surgery

SHUNICHI KONDO, Yoshiaki Katada, Yoshihito Irie, Eitoshi Tsuboi, Kyu Rokkaku,
Disclosure

Speaker name: **SHUNICHI KONDO**

I have the following potential conflicts of interest to report:

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

✓ I do not have any potential conflict of interest
Contents

1. Technique of our methods
2. Case presentation
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Treatment strategy of aortic arch TAA and AD (chronic type A)

gold standard: TAR (total arch replacement)

zone 0 TEVAR: *branched type
full order made: inoue SG investigational device
*total debranch
*chimney
*in situ fenestration
TEVAR using in situ fenestration

*our technique:
• zone 0 landing
• 2-3 fenestration and branching
  --- no bypass grafting
  LSCA transposition into LCCA
  --- if LSCA is highly tortuous
• CPB
  --- brain protection / conversion TAR
Essential points of endovascular TAR (endo-TAR)

* no sternotomy
* no bypass grafting
* anatomical reconstruction
CASE

- 58 years old female
- Past History: medication for HT
- Present illness: She had abnormal shadow in chest X-p pointed out at other clinic.
Pre operative CT
18 month after operation follow-up CT
82 y.o. male
saccular TAA and type B aortic dissection
preoperative 3D-CT
18 months follow-up
Operative procedure

- Bilateral carotid artery and bilateral subclavian artery exposure.
- Rt. Femoral vein exposure.
- Lt. brachial artery puncture and 6Fr. sheath insert.
- Three snare wire and Lunderquist stiff wire placement.
- CPB start for brain protection.
- Gore C-TAG placement.
- PTC (precutaneous transhepatic cholangiography) needle 20G & 4Fr. sheath
- Bronchial biopsy needle
- 0.035 PTA balloon
- 0.014 PTA balloon for bronchial biopsy
- Super stiff wire
- Dry seal sheath 12Fr.
- Excluder leg extension
Cardiopulmonary bypass system

#blood flow rate; 10-15 mL/kg/min
  * antegrade selective cerebral perfusion
  * flow ratio; BCA:LCCA:LSCA = 3:2:2
  * circuit pressure; 100-150 mmHg
  * blood temperature; 34 ℃

#started before stentgraft deployment
CPB circuit

Selective brain perfusion (Three roller pump)

Perfusion circuit

Spare circuit

withdrawal

Circuit for selective brain perfusion

withdrawal

Rt. Axillary artery 14Fr

Lt.brachial artery 6Fr

substitution (for LCA) 12Fr

Rt.femoral vein 20Fr

Cetrifugal pump for Main circuit

Ascending Aorta

F A
squid capture technique

stentgraft

#TAG/cTAG

#EXCLUDER iliac extender, Endurant leg

#covered stent (Fluency)
Conclusions

#endo-TAR can be performed using commercially available devices in Japan.

#acceptable interim results were achieved