



IX Congresso
Novas Fronteiras
em Medicina
Cardiovascular

22 a 24 de Fevereiro 2019

The Village Praia
D'El Rey - Óbidos

A new treatment approach for acute Type A dissection

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Disclosure

I do not have any potential conflict of interest

Proctor for Edwards, Livanova and Abbott (St.Jude)

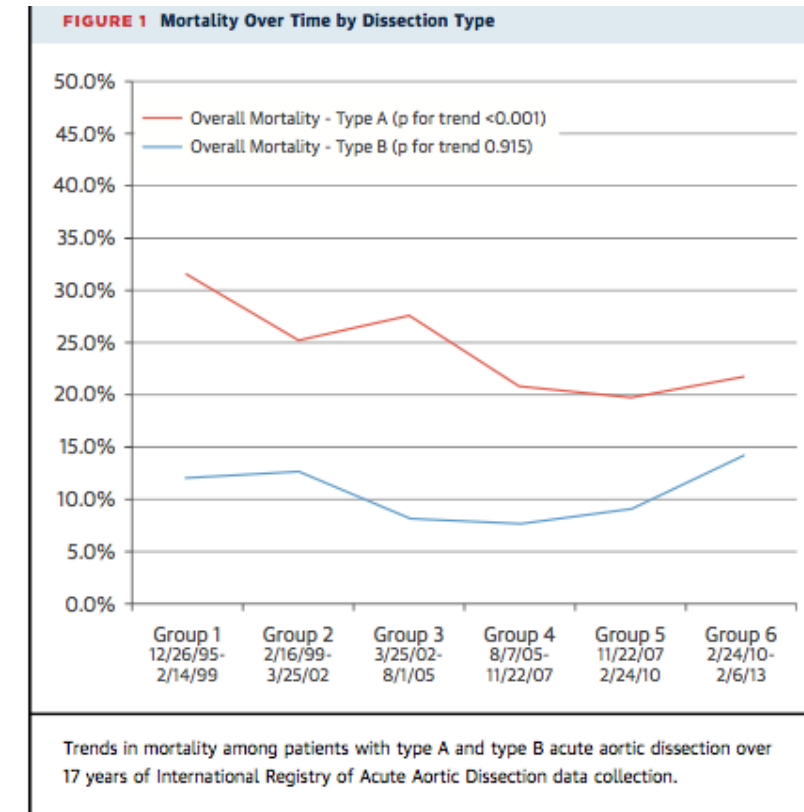


Type A AAD - IRAD

JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY

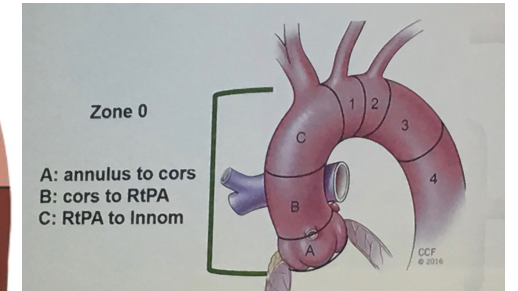
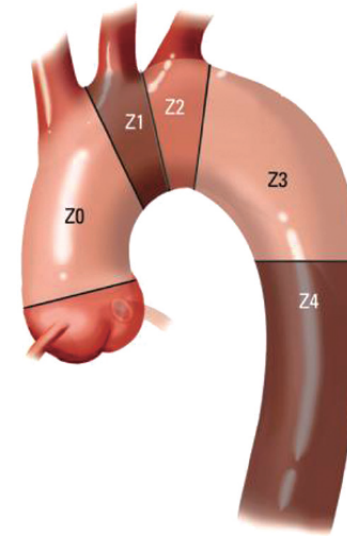
VOL. 66, NO. 4, 2015

- Despite improving results, still very deadly
 - 1970's - 30 to 60% mortality
 - 2000's - 5 to 25% while on worse patients (modern IRAD data 18%)
- Malperfusion is associated with higher mortality
- Currently isolated malperfusion treatment without ascending aorta replacement has mortality of >70%



Endografting in type A AAD

- The presence of AV, coronary *ostia*, and supra-aortic branches makes AA endografting in type A AAD a difficult procedure
- In very selected patients, with an intimal tear distant from these structures, with adequate landing zones and high surgical risk, it may be an option, but...
 - no dedicated devices
 - need for rapid pacing?
 - risk of aortic rupture with stent radial force
 - etc....

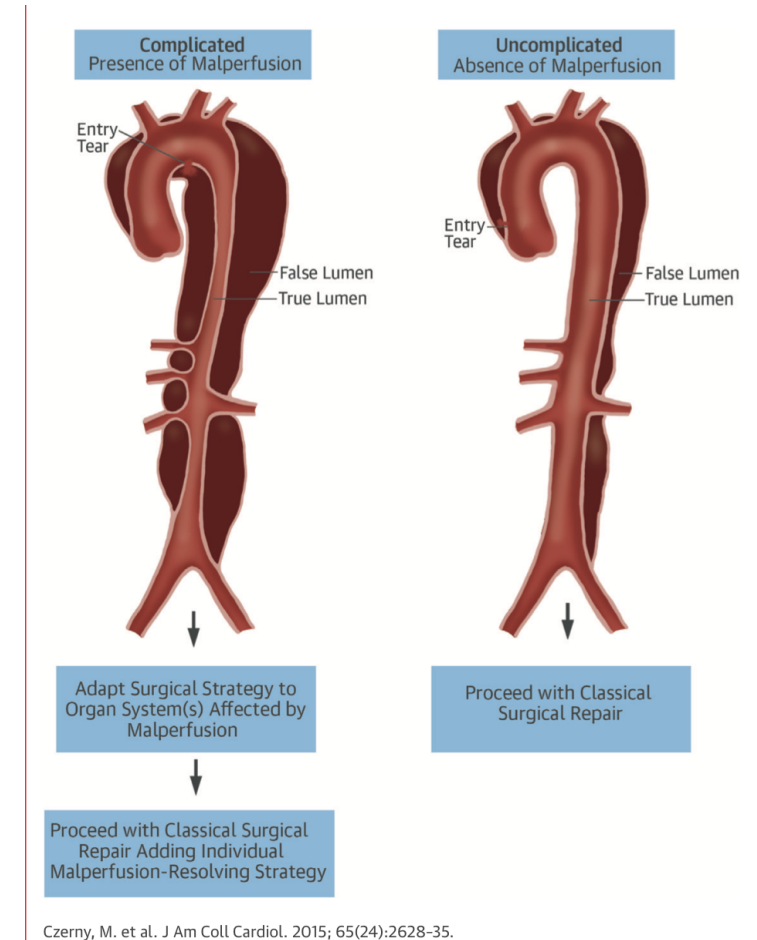




From Cleveland Clinic presented aortic symposium 2016

Current issues in type A AAD - malperfusion

- Recent advances in imaging, perfusion, surgical technique, etc, have lowered overall mortality but it's still consistently above 20% in most centers
- Malperfusion is present in up to a third of type A AAD, and raises in-hospital and long term mortality significantly
- Treatment of malperfusion may be the next best target for improvement and innovation
- Malperfusion hazard is higher with more systems involved
- Mesenteric malperfusion is the deadliest
- Most groups still address only the ascending aorta tear



**The Impact of Pre-Operative
Malperfusion on Outcome in
Acute Type A Aortic Dissection**

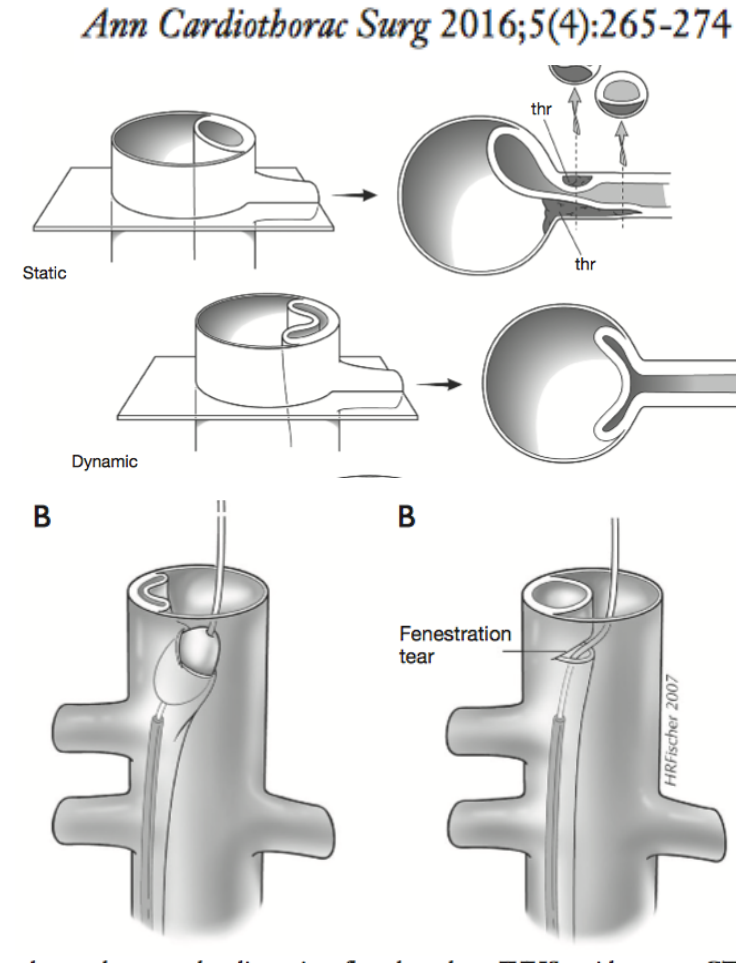
Results From the GERAADA Registry

JACC VOL. 65, NO. 24, 2015

JUNE 23, 2015:2628-35

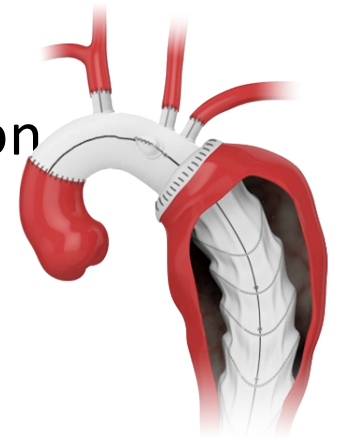
Improving the current treatment of malperfusion in type A AAD

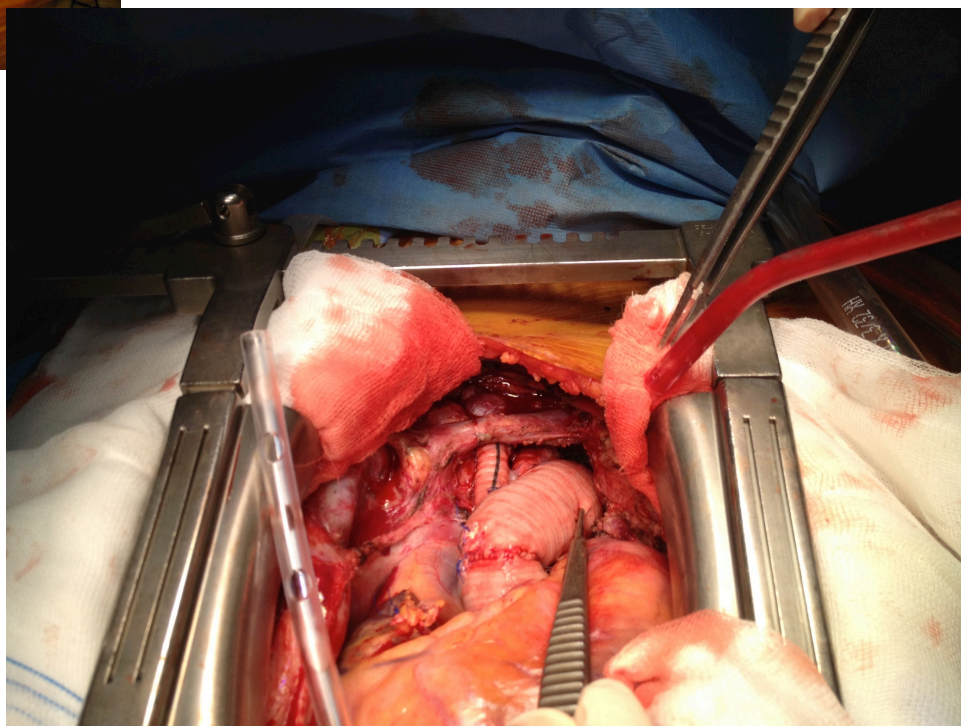
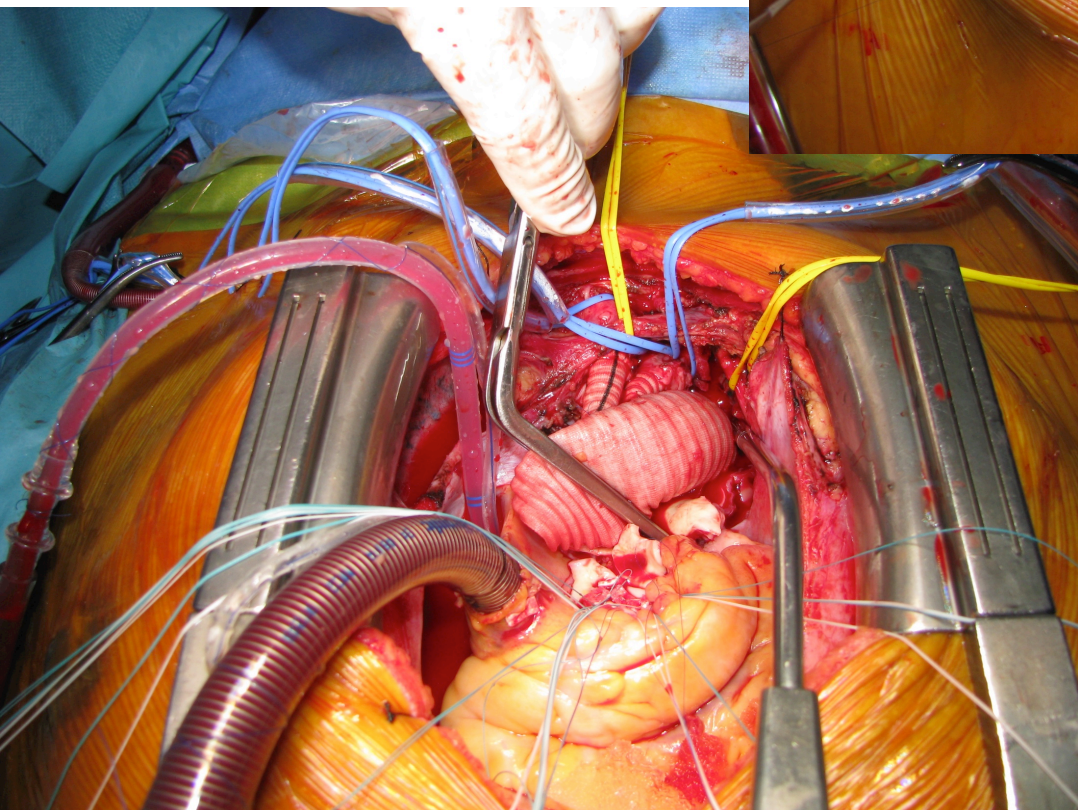
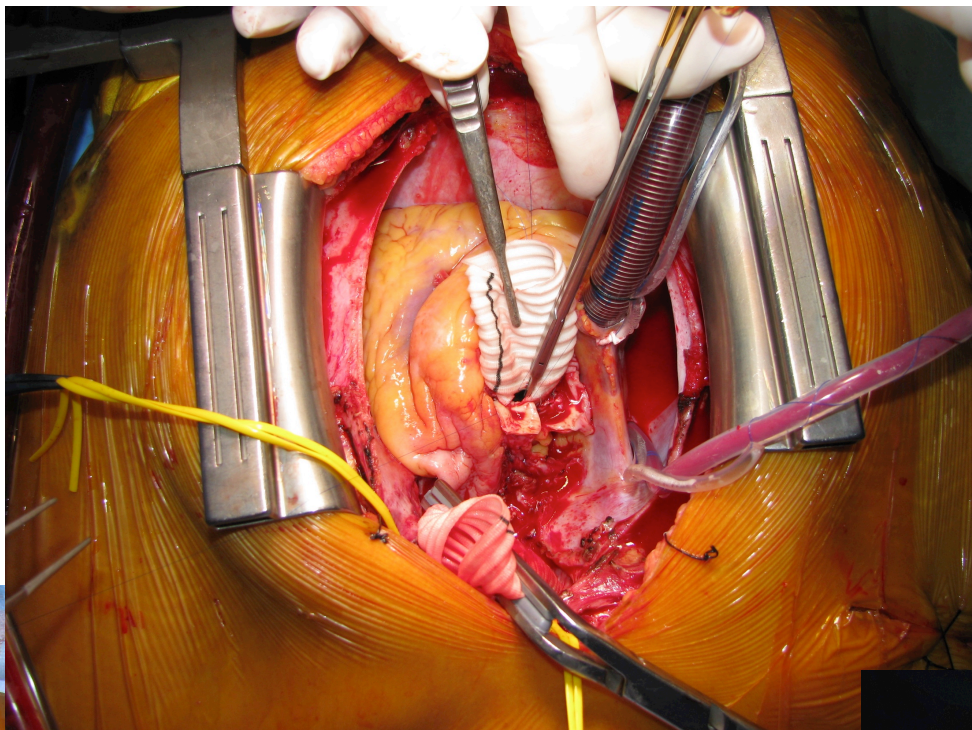
- Some groups (U. Michigan) have advocated correcting malperfusion percutaneously in cases with static visceral obstruction, and treating ascending aorta later (days to months)
 - 67% of patients underwent later uneventful ascending aortic treatment, 33% died before AA treatment - significant attrition rate
 - Compares favorably with results of immediate AA surgery in historical cohort malperfusion patients (mortality 89%)

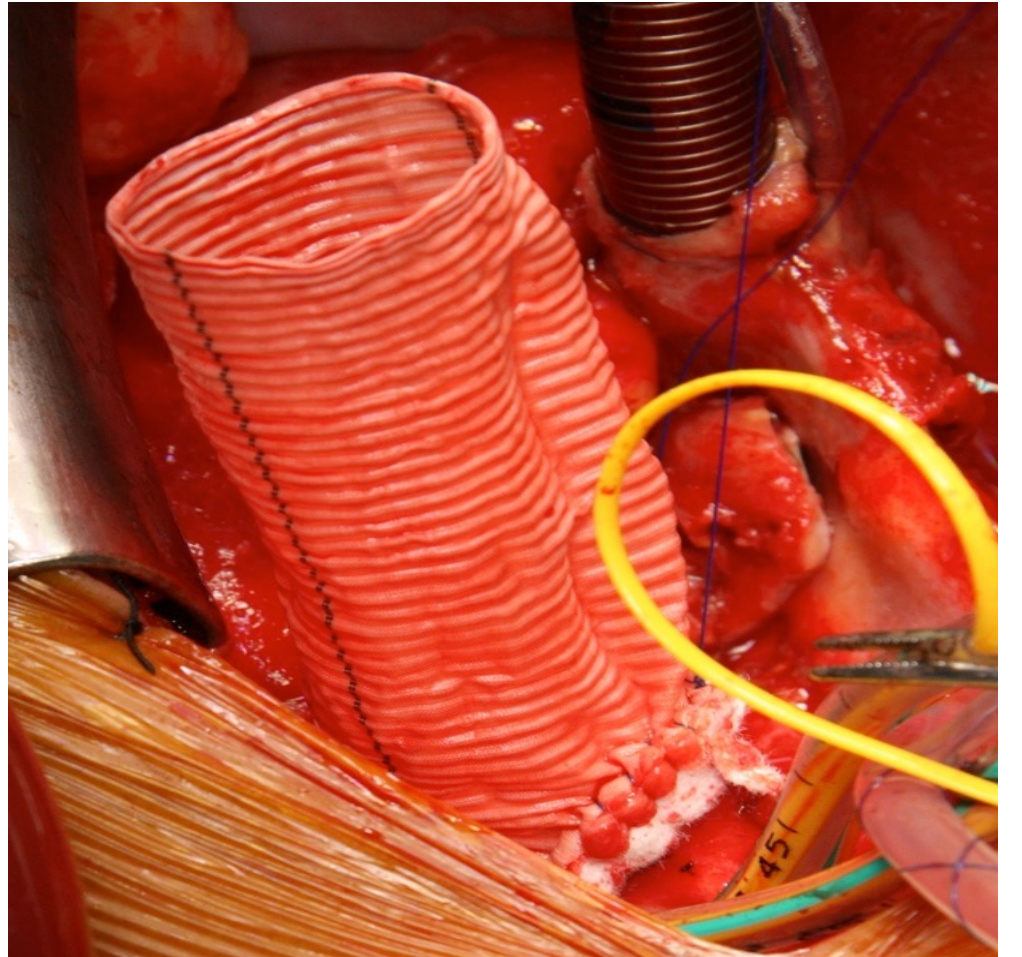


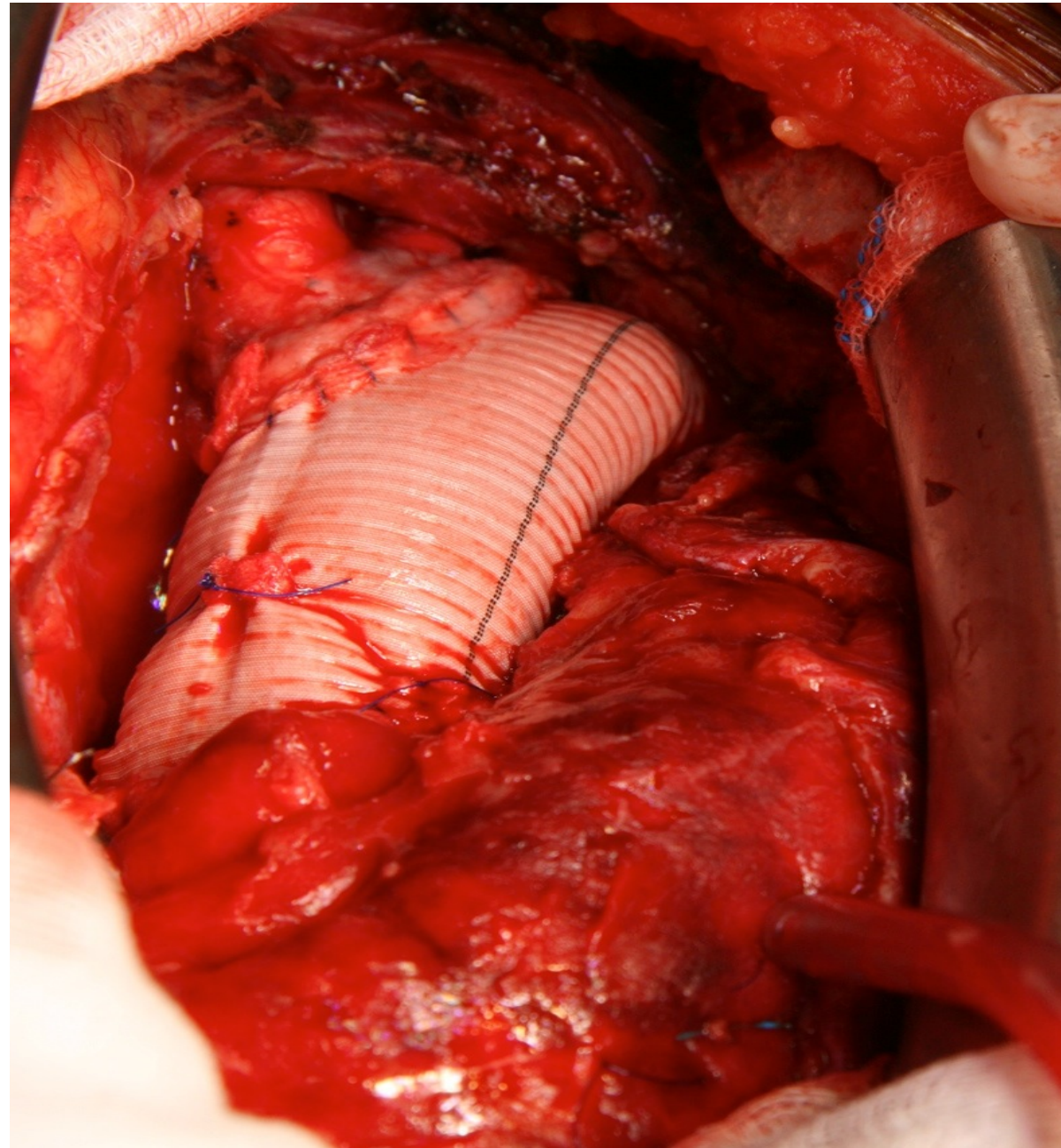
Current issues in type A AAD - distal aortic disease

- Late (>5-years) distal aortic disease remains frequent and deadly
- Marfan patients are at especially high risk for distal aortic disease progression
- Most groups follow the “live to fight another day” philosophy
- Some groups have performed FET indiscriminately in type A AAD









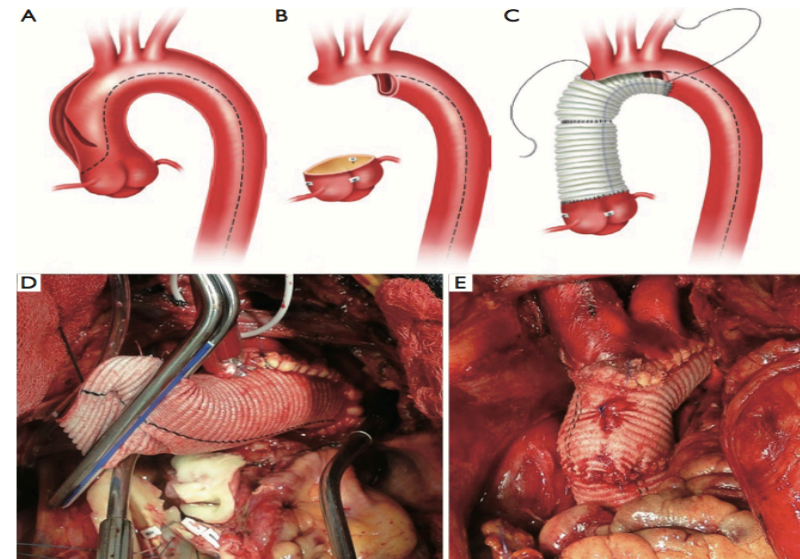


2018

- 29 type A acute dissections
 - 5 aortic arch replacement
 - 3 frozen elephant trunk
 - 12 repair peninsula style

Annals of cardiothoracic surgery, Vol 5, No 4 July 2016

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Extended Surgery

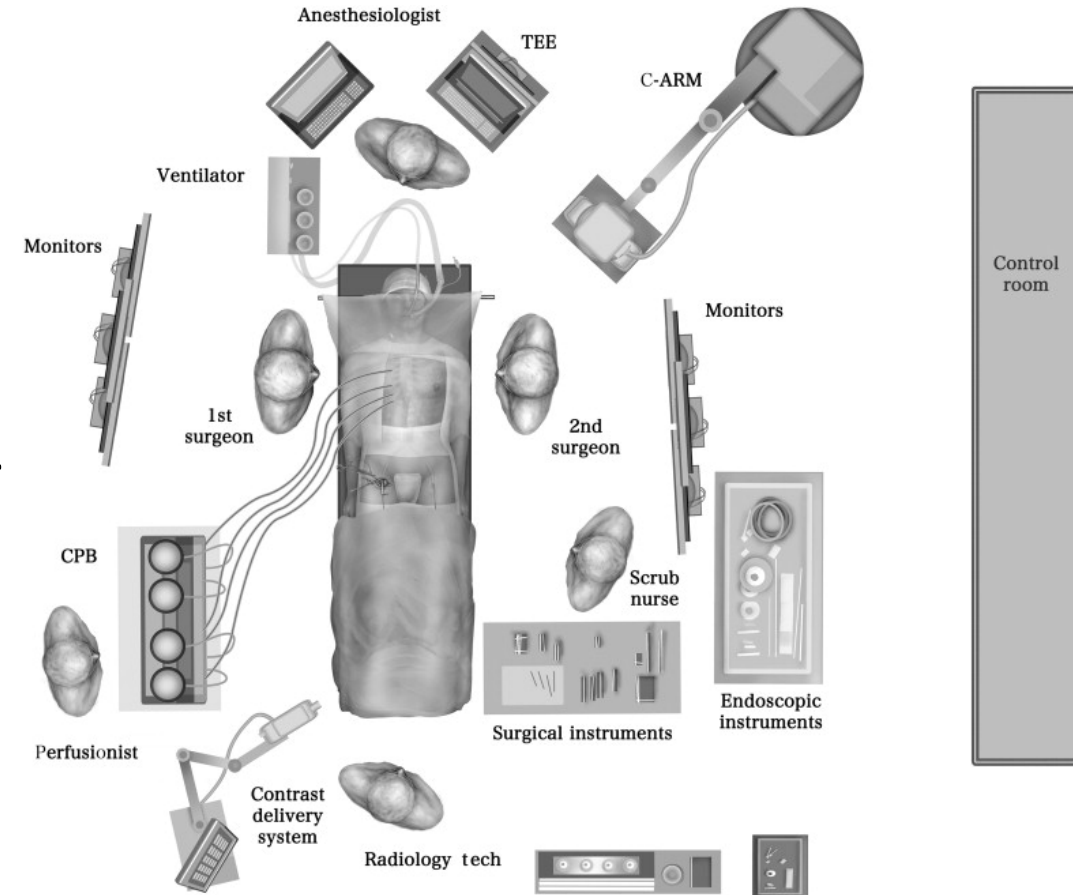
- 16 patients
- 10 male / 6 female
- Mean age 57 years (28-71)
- Surgery
 - Evita – 10 patients
 - 3 bentall + evita
 - 2 evita + Asc aorta replacement
 - 1 Asc aorta +arch+Evita+ reinplant. LSCA
 - ET - 6

Evita open

- 10 patients
 - Entry tears on isthmus or arch extending to isthmus
 - Secondary tears on descending aorta
 - Total collapse of true lumen after correction of TAAD with malperfusion syndrome
 - Age 34 to 68 (6 men, 4 women)
 - Length of stay - 3,1 dias icu, 7,3 ward.
 - Morbidity and mortality -- 0

A new approach to type A AAD

- Currently the best approach may be to address both these problems simultaneously
 - Hybrid room
 - Open ascending aortic repair
 - Treatment of descending aorta with FET if involved by dissection
 - Visceral completion angiography or CT in the hybrid room
 - Immediate percutaneous treatment of residual malperfusion



Case Report

- 43 y
 - Male
 - Nurse
-
- No relevant medical history
 - No medication
 - Non smoker
 - No history of substance abuse

Feb 2015

- Acute type A aortic dissection
- No malperfusion syndrome was recognized.
- Emergent surgical replacement of the ascending aorta



Cortesy Prof. Luis Mendes Pedro

May 2015

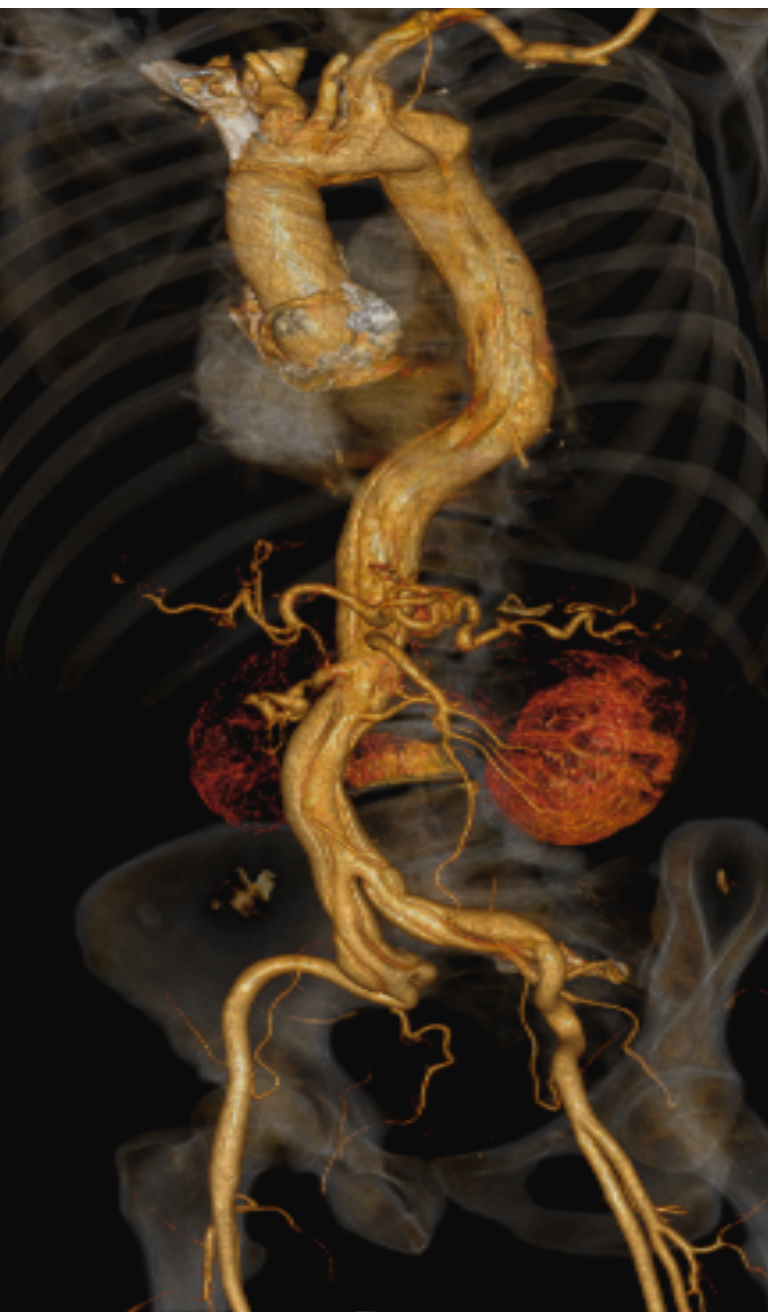
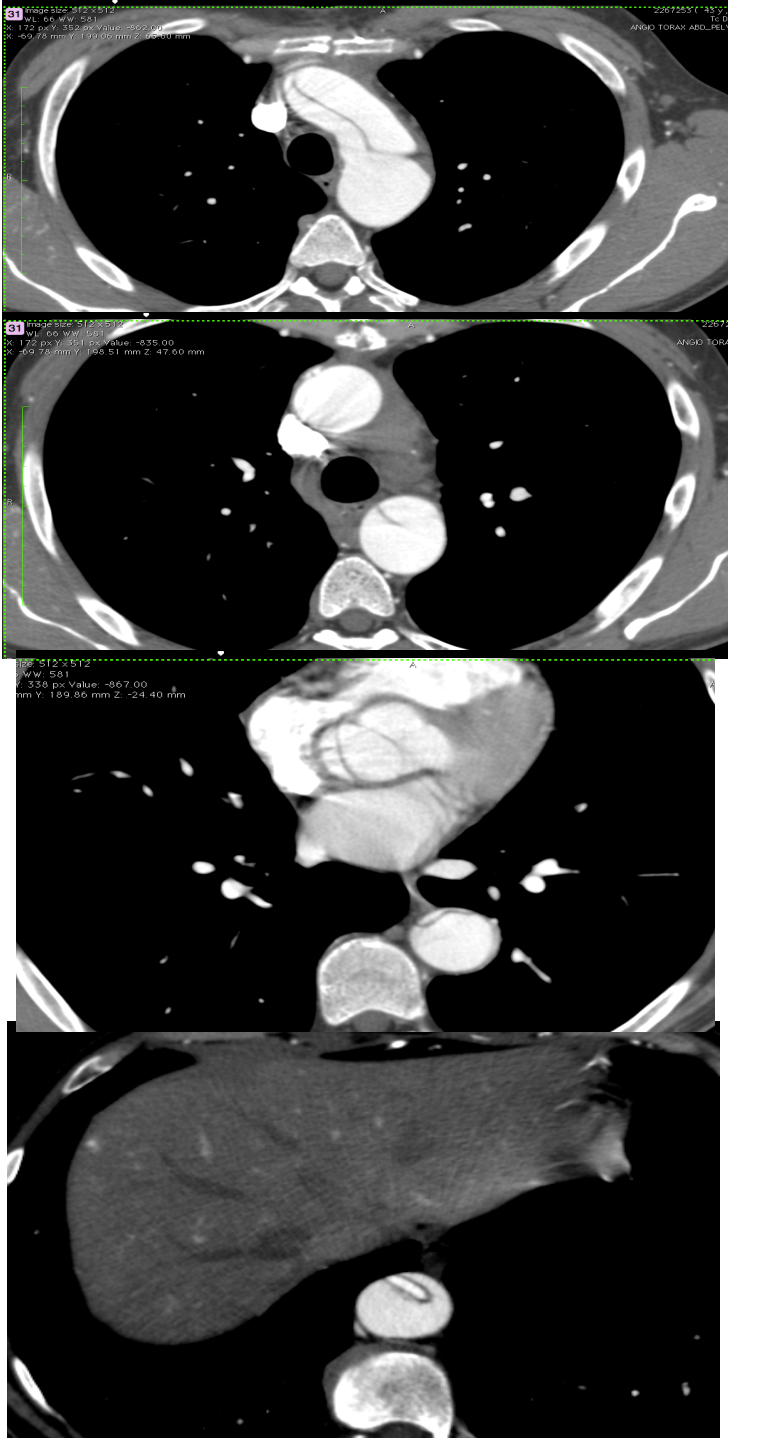
Postprandial abdominal pain.

No change in bowel habits.

No abdominal tenderness.

Severe aortic regurgitation.

Feb 2015



May 2015

Aortic valve replacement (biologic valve)

+

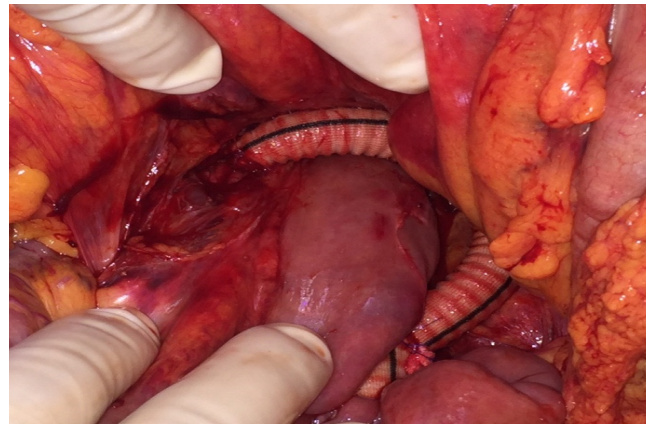
Replacement of the aortic arch (frozen *elephant trunk*) with E-Vita open.

+

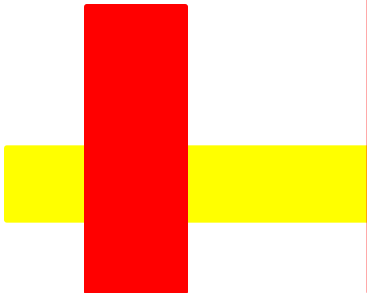
Abdominal aortic fenestration + aorto-biiliac interposition graft

+

Aorto-SMA bypass



Feb 2015



Nov 2015

Persistent postprandial abdominal discomfort (?)

Severe arterial hypertension

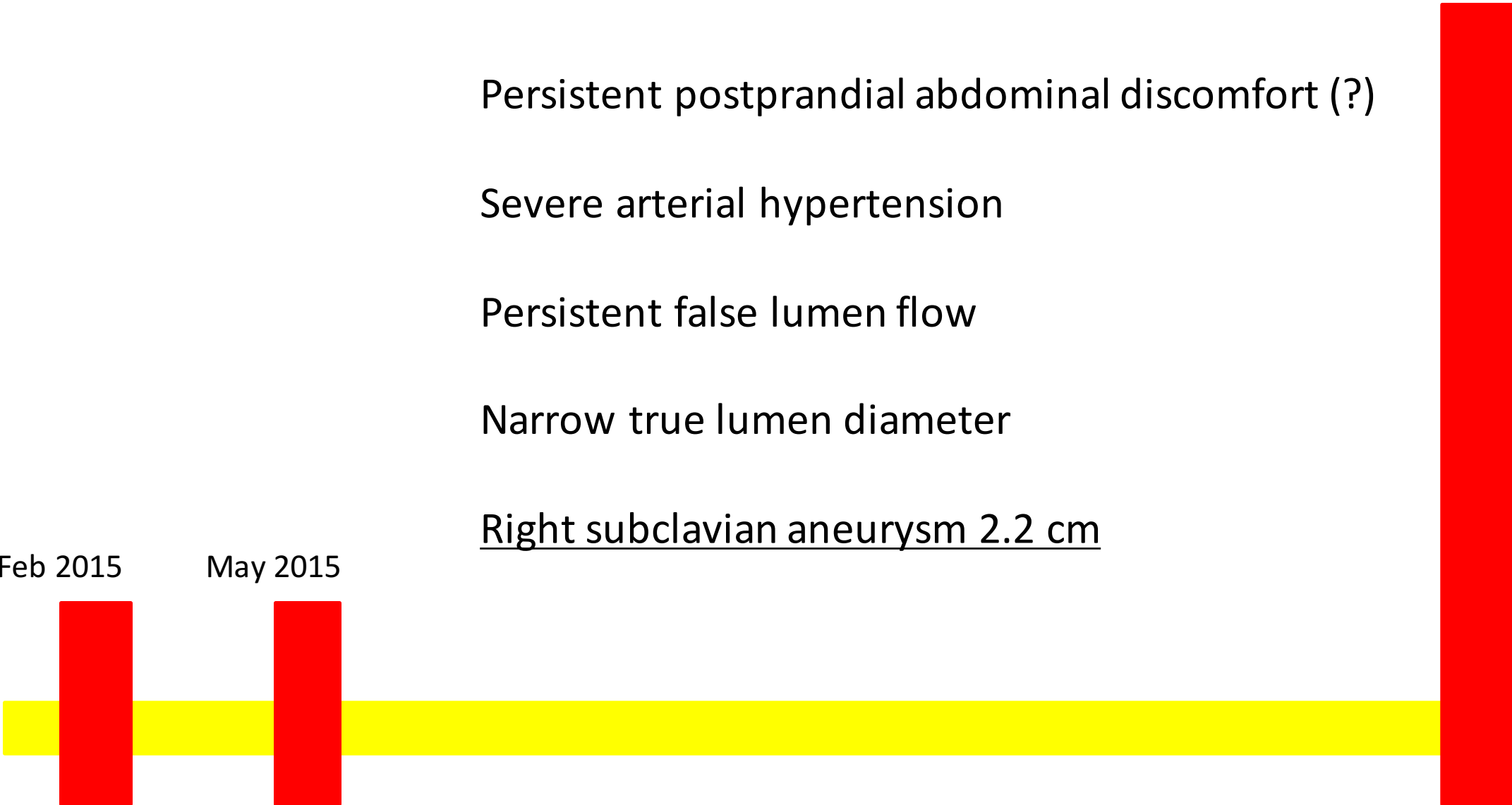
Persistent false lumen flow

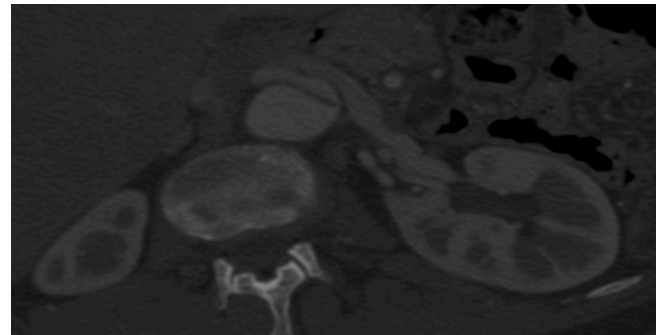
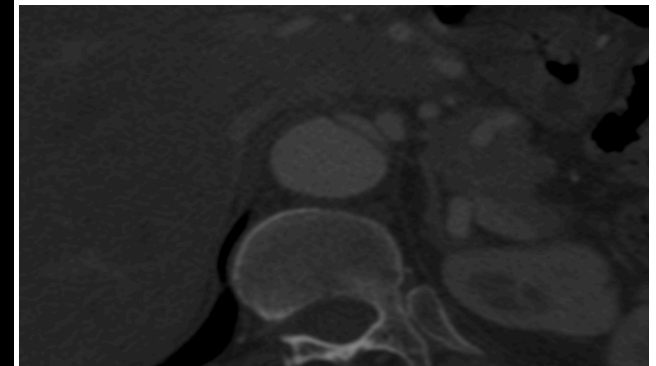
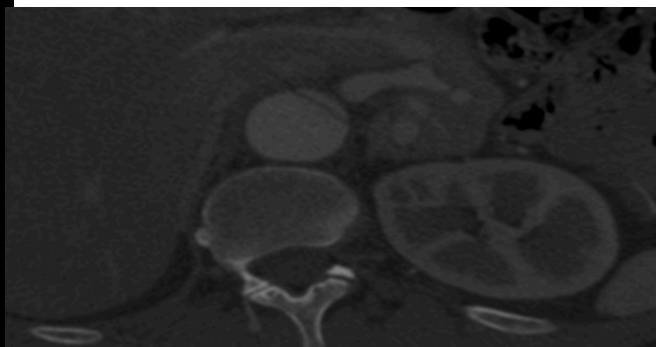
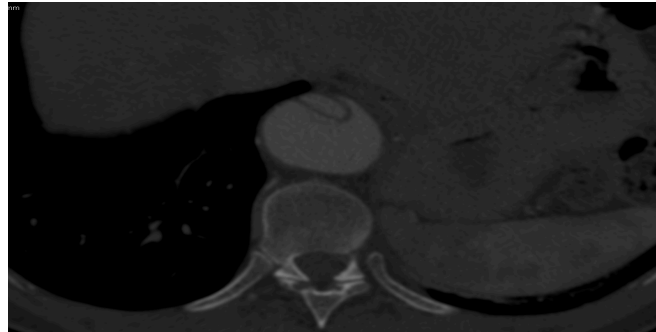
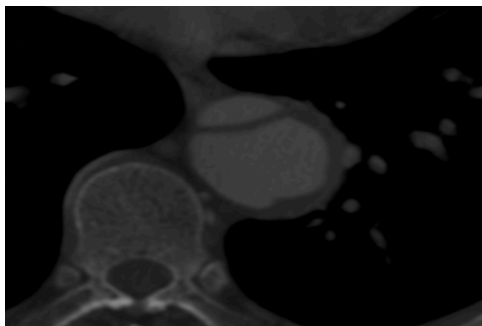
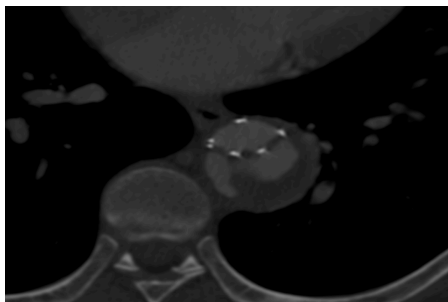
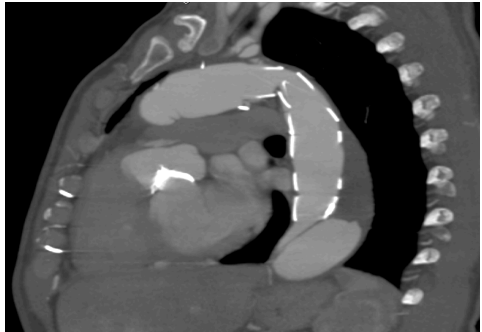
Narrow true lumen diameter

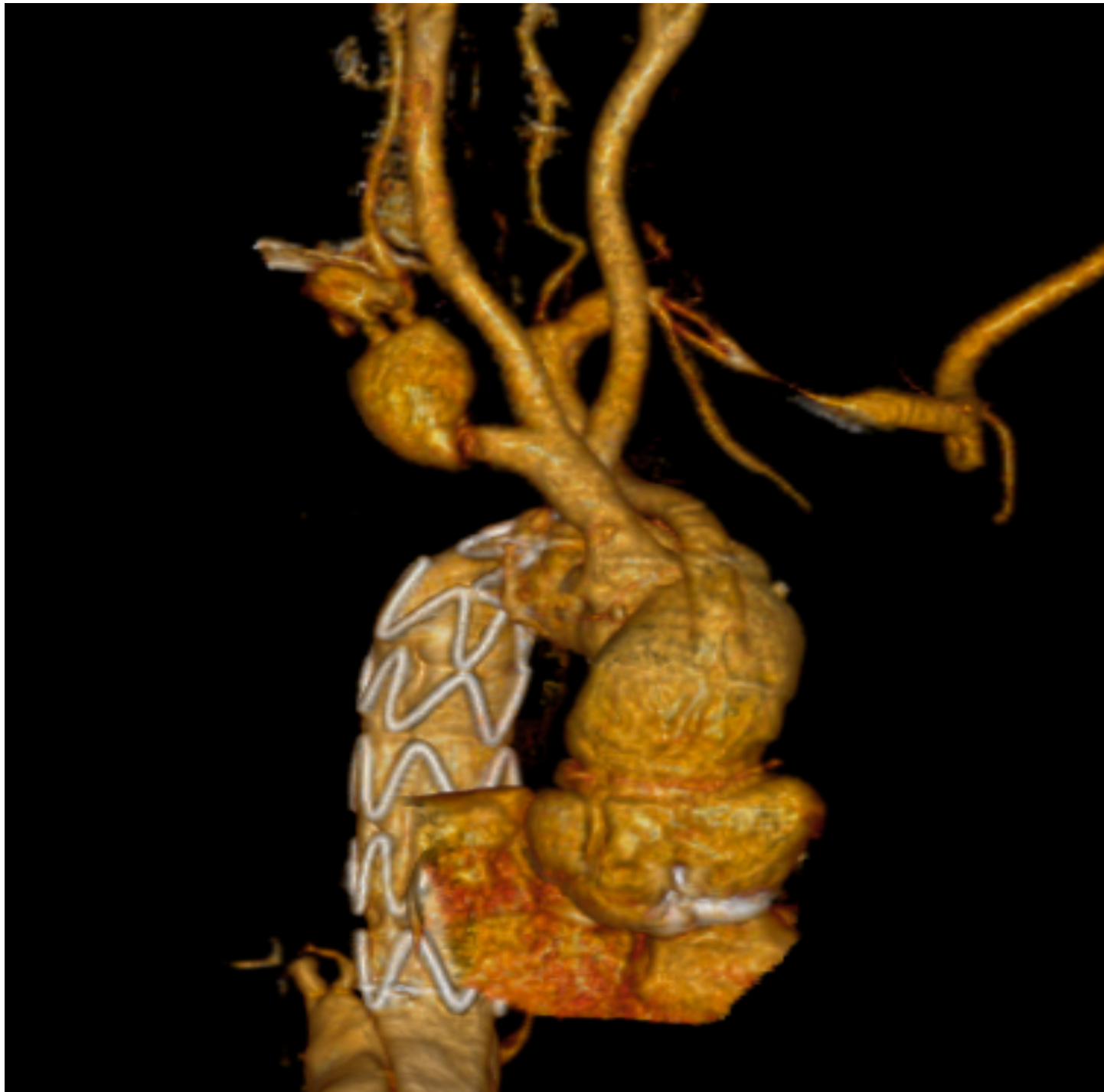
Right subclavian aneurysm 2.2 cm

Feb 2015

May 2015

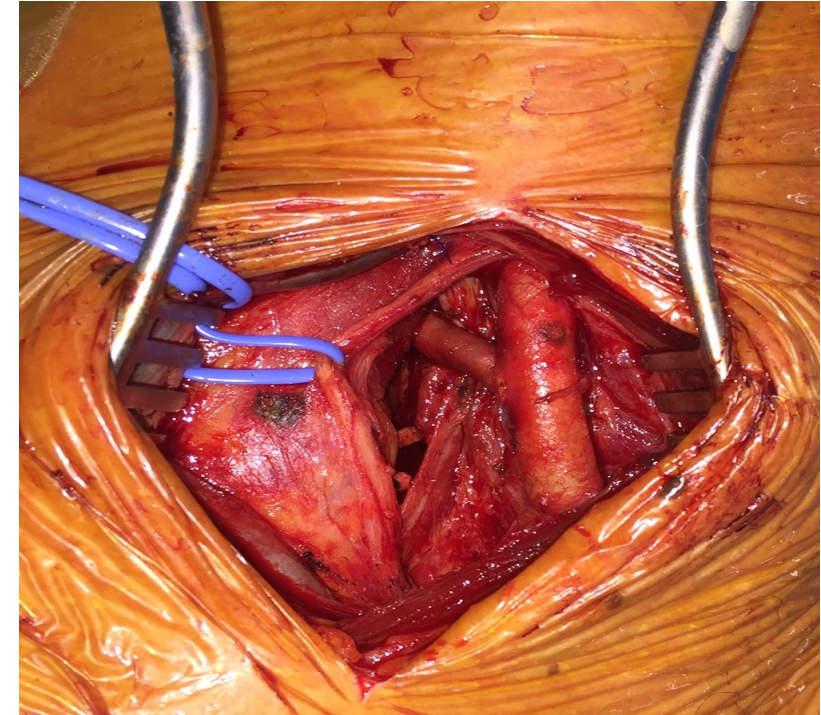
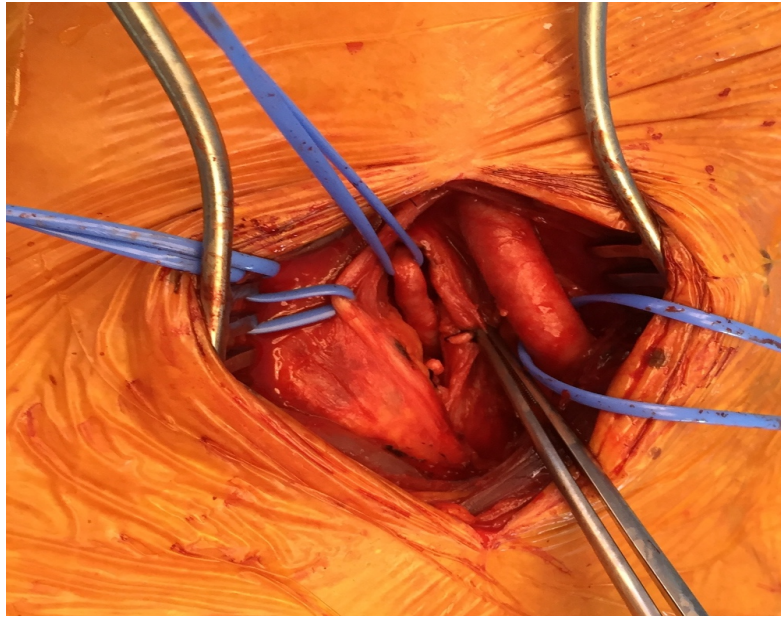






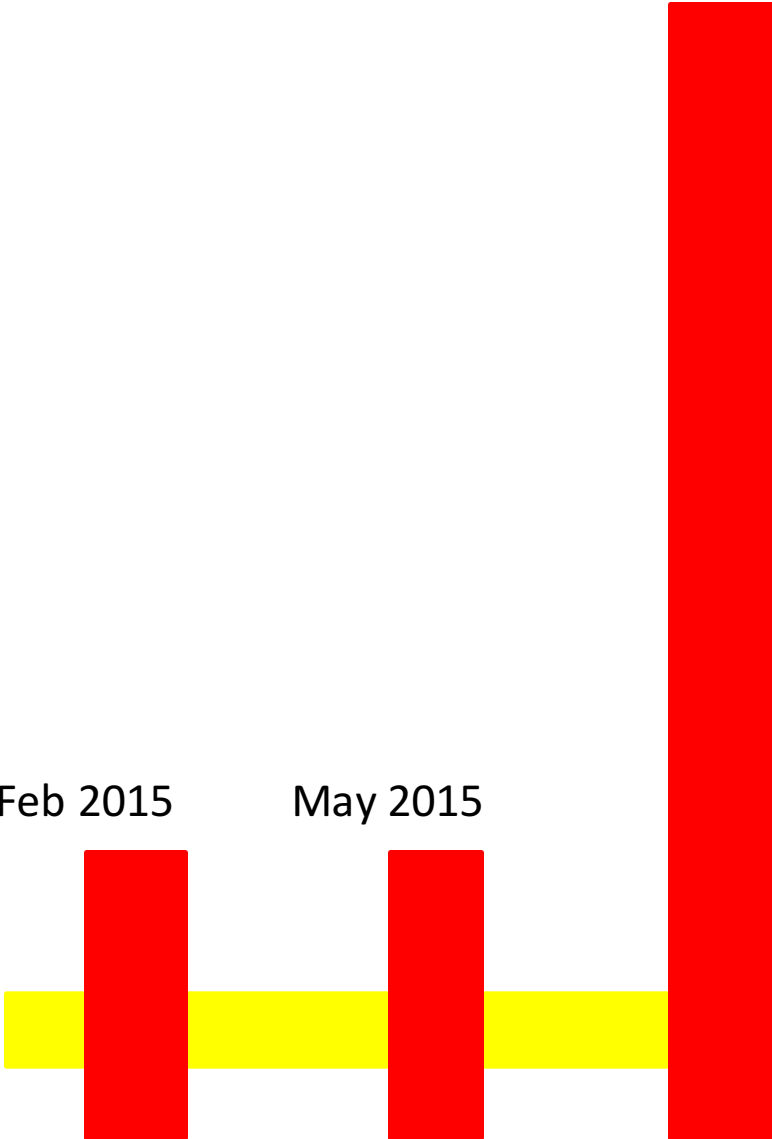
Nov 2015

Right vertebral - carotid transposition

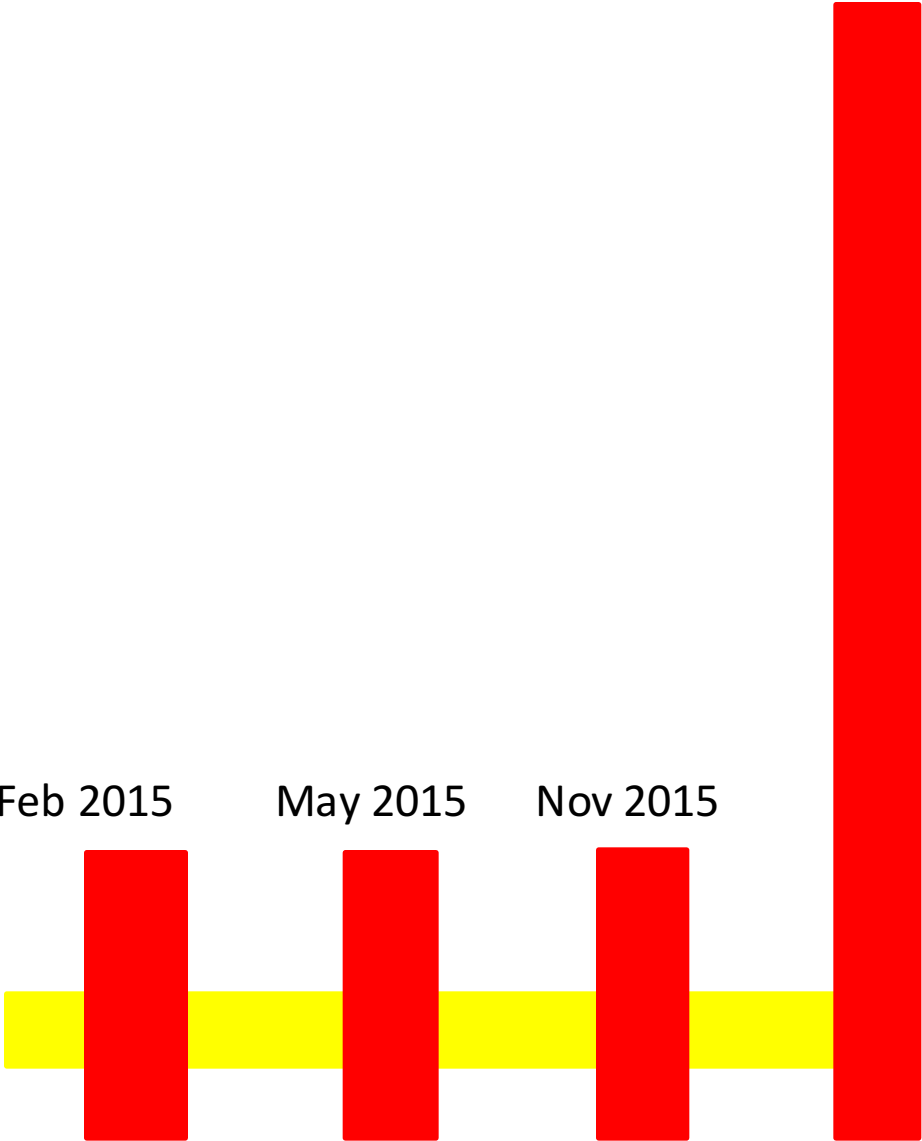


Feb 2015

May 2015



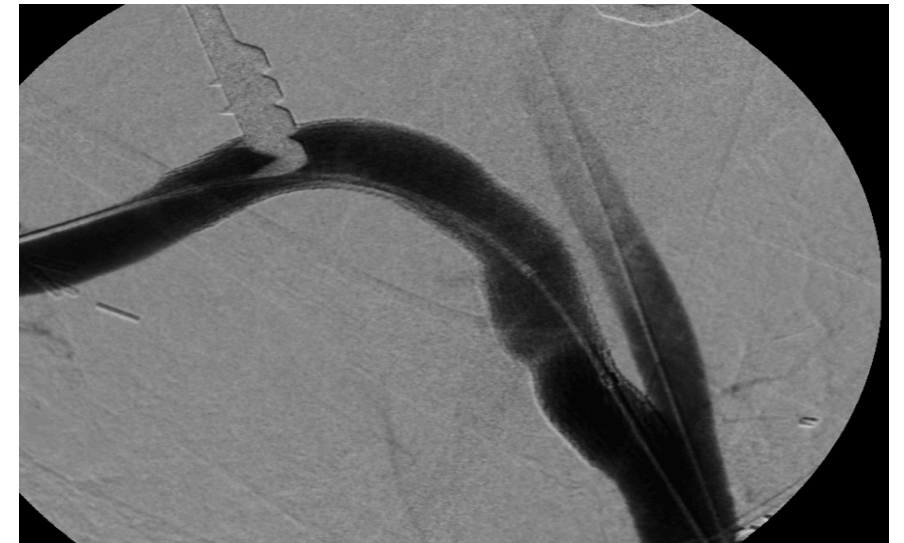
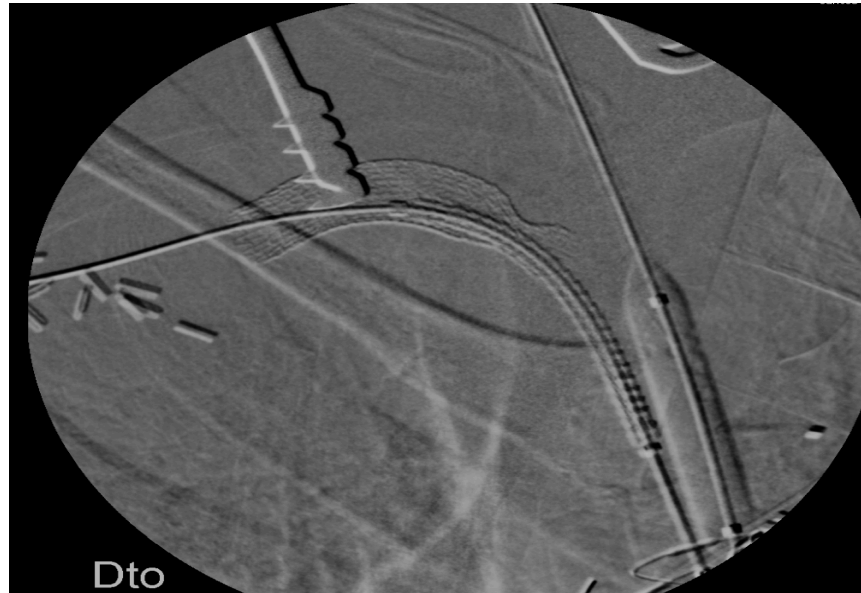
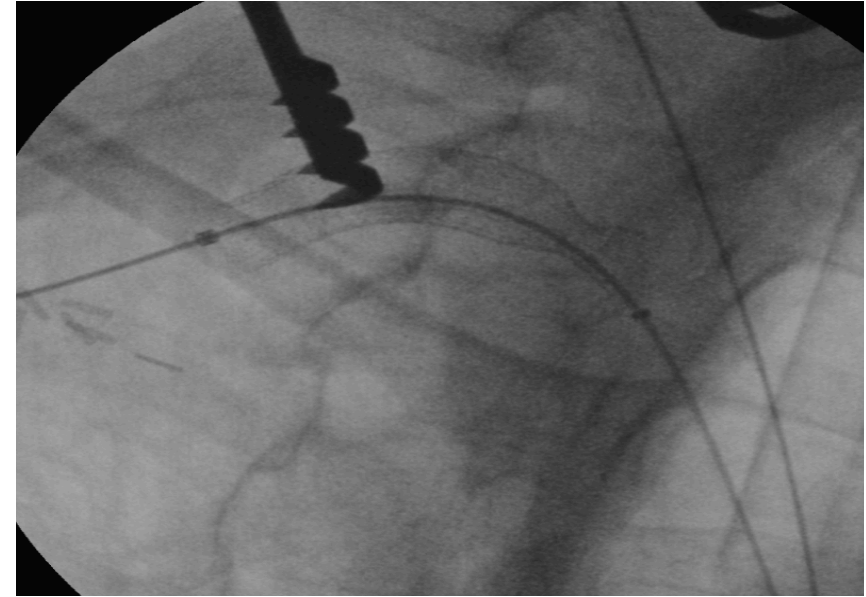
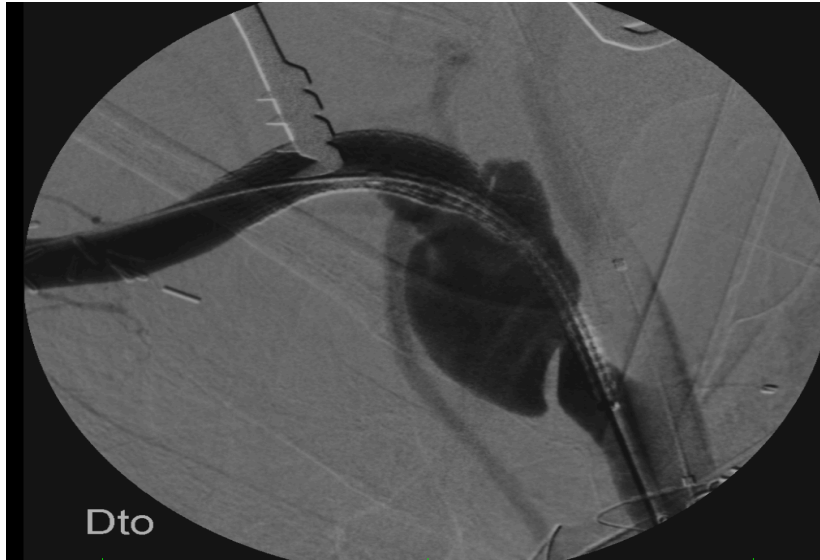
Dec 2015



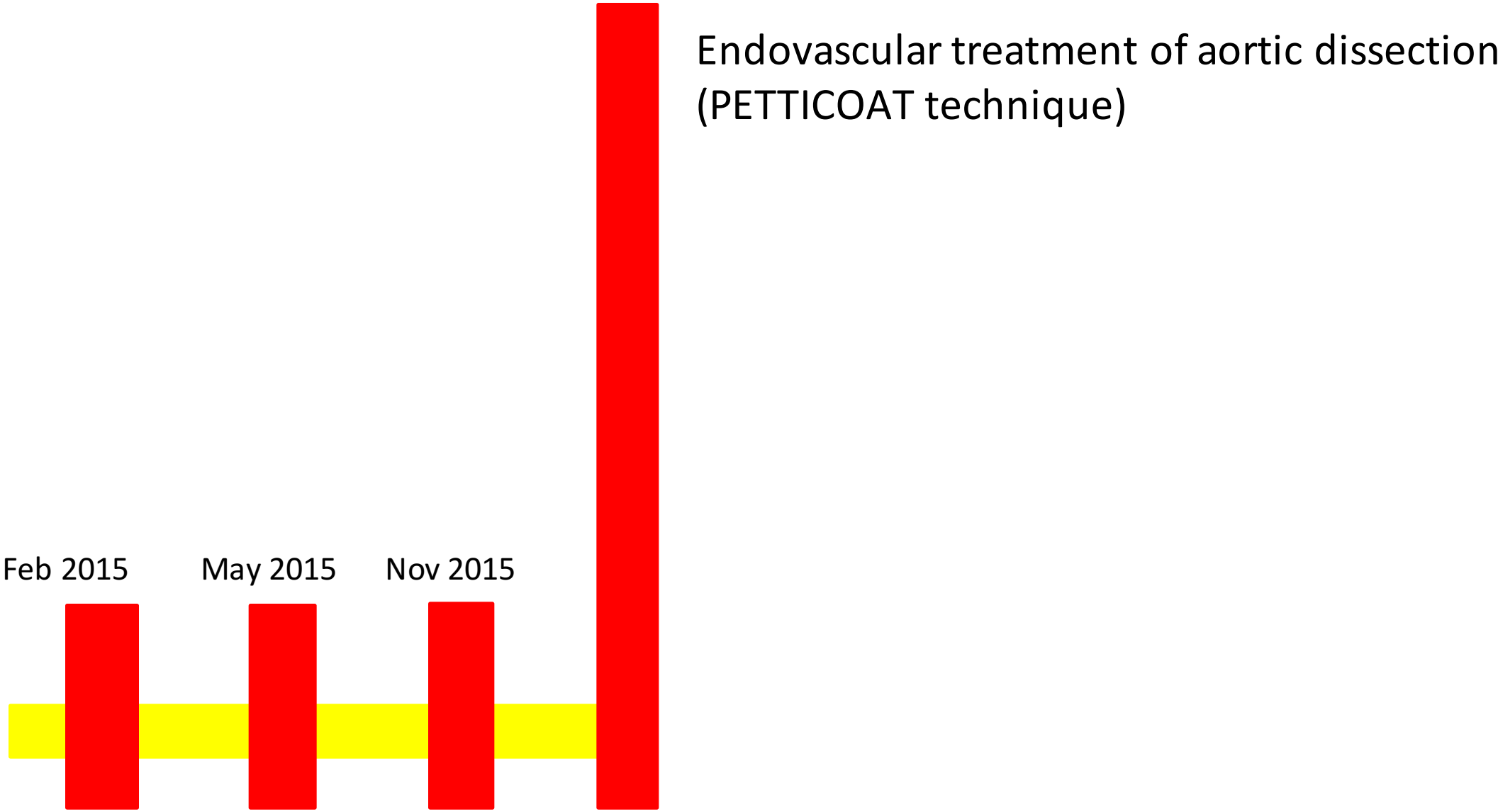
Stent graft exclusion of right subclavian aneurysm



Dec 2015

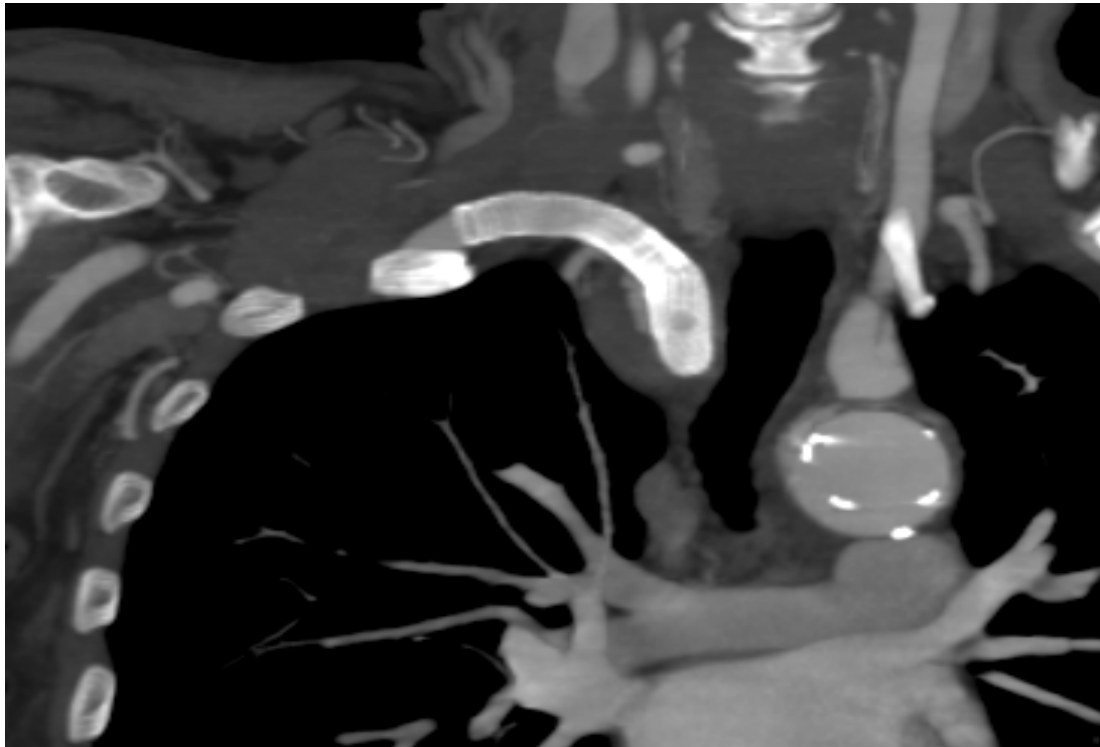


Dec 2015



Discharge at 6th pos-op day

- Asymptomatic
- Controlled hypertension:
(Bisoprolol 5mg + losartan 12,5mg)



Conclusions

- Significantly lowering type A AAD mortality must go beyond current therapy
- Malperfusion is one of the most frequent and deadly complications of type A AAD
- Distal aortic disease is a late complication that arises more frequently with "live to fight another day"
- Treating only malperfusion initially has significant mortality during interim period
- One time type A AAD in hybrid room will allow further lowering the mortality