Why Analyzing The Nature Of The False Lumen And The Origins Of Visceral Arteries Is Critical To The Treatment Of Acute TBADs:

How To Do It And What To Do About It

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False lumen analysis

1. Best treatment   not only TEVAR
2. Who to treat?   predictors of evolution
3. Chance of TEVAR success

How Do We Achieve Better Results?

- Main goal: completely exclude the FL flow to the thoracic aorta   thrombus formation
  1. TEVAR (length …, distal bare stent)
  2. Exclude all back flow from proximal or distal reentries
     - Stent graft LSA or
     - visceral branches & iliacs
     - Abdominal stent graft

False lumen analysis

1. Best treatment   not only TEVAR
2. Who to treat?   predictors of evolution
3. Chance of TEVAR success   number of collaterals…

1. Proximal entry tear (size, distance / LSA)
2. FL diameter & shape
3. Extension
4. Distal re-entries
5. Origin of collaterals
Dissection Debate

- Randomized controlled trials have demonstrated the long-term benefit of endovascular treatment to prevent aortic-related mortality,
- however pre-emptive TEVAR may not be the solution for all patients because of the occurrence of adverse events such as death, stroke and paraplegia.

**Predictive factors of TEVAR failure**

A patient-specific approach designed to intervene only
- in patients that are at high risk of developing complications
- With a high chance of TEVAR success

**Predictors of aortic growth in uncomplicated type B aortic dissections**


**Radiologic Predictors**

- Aortic geometry
- Entry tears characteristics
- False lumen characteristics

**Computed Tomography Imaging Features in Acute Uncomplicated Stanford Type-B Aortic Dissection Predict Late Adverse Events**


- aortic diameter, size, location and number of primary entry tears, and the size, extent, and relative location of the true and false lumen, number of channels and false lumen thrombosis, were considered.

- 83 patients / average F Up time 2.36 years (0.89-5.6).
- Adverse events : multivariable Cox regression analysis:
  - connective tissue disease (P =0.01),
  - circumferential extent of false lumen in angular degrees (P =0.003),
  - maximum aortic diameter (P =0.015),
  - false lumen outflow (P =0.055),
  - number of intercostal arteries (P =0.024).
False lumen analysis

1. Best treatment  not only TEVAR
    46% of patients require a reintervention after TEVAR

2. Who to treat? Criteria for invasive treatment
    predictors of evolution

3. Chance of TEVAR success
   Who gets favorable re-modeling? And why?

Late aneurysmal degeneration of the aorta are correlated to specific anatomic features of the aorta and branch vessels

- Patients with a large baseline thoracic FL diameter or a large abdominal aortic diameter (>37 mm)
- Residual thoracic FL perfusion & endoleaks are major determinants

CONCLUSIONS

• High-risk groups of evolution are being better defined
• TEVAR data supports survival advantage – as long as you can minimize the risk with early intervention
• An extensive preoperative analysis of anatomical lesions is crucial.