Early predictive factors of late complications in type B aortic dissection

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Disclosure
Speaker name: Jean-Marc ALSAC
I do not have any potential conflict of interest

Definitions

Acute Type B Dissection
Acute Complications
- Rupture / Malperfusion
Ergent Intervention

Late Complications
- Rupture

Late Complications in TBAD
- Aneurysmal progression (≥ 55 mm)
- Rupture

1 every 4 patients at 3 years

Preventive TEVAR

INSTEAD XL: 5 years results

<table>
<thead>
<tr>
<th>5 y Follow-up</th>
<th>68 CMT</th>
<th>72 TEVAR</th>
<th>P</th>
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<tbody>
<tr>
<td>Aneurysmal progression</td>
<td>48.1%</td>
<td>27.0%</td>
<td>.04</td>
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<tr>
<td>Aortic-related Mortality</td>
<td>19.3%</td>
<td>8.9%</td>
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Preventive TEVAR improves late outcome

Selection of patients

Predicting aortic enlargement in type B aortic dissection

Predictors of aortic growth in uncomplicated type B aortic dissection

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<tr>
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<td>1</td>
</tr>
<tr>
<td>Male gender</td>
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Early predictive factors
Clinical Biological Morphological

INSTEAD XL: 5 years results

68 CMT, 72 TEVAR

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**Predicitive factors**

**Clinical Factors:**
- Patient age < 60 yo
- Heart rate > 60 BPM
- Male gender
- White race
- Marfan’s syndrome

**Biological Factors:**
- Fibrinogen-fibrin degradation product $\geq 20 \mu g/ml$ on admission
  
  = Disseminated Intravascular Coagulation

  Thrombus renewal in case of partially thrombosed false lumen

**Morphological Factors:**
- Diameter $\geq 40$ mm at initial imaging
- Elliptic configuration of the TL
- Patent False Lumen
- Partially thrombosed FL
- Thrombosed FL with ulcer-like projections

- One entry tear
- Large entry tear $\geq 10$ mm
- Tear / FL located at the inner curvature

**Integration of functional imaging**
- 18 FDG PET-Scan

**Biomarkers of ongoing inflammation**
- FDP / D-Dimer / CRP
- Elastase / MPO / Free DNA

**Specific tools of volume measurements**
- Compare globally TL / FL
**Personalized risk prediction**

- Hemodynamic imaging:
  - Areas of higher velocity

**Negative Predictors**

- Which patients should be left to OMT alone?
  - Increasing age ≥ 60 y/o
  - Heart rate < 60 bpm
  - Diameter < 40 mm
  - Closed / Thromosed FL / IMH

**Conclusions**

- TBAD not such a benign pathology
- High rates of acute and late complications
- Early predictive factors
- Integrate: Clinical / Biological / Morphological
- Identify High risk patients
- Benefit from earlier / more aggressive treatment

**Who may not benefit from TEVAR?**