Ruptured Descending Thoracic Aortic Aneurysm (RDTAA) Successfully Treated by Thoracic Endovascular Aortic Repair (TEVAR)

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Case

- Male, 56 year-old

- CC : Dyspnea and left back pain for 2 days
  - Transferred from other hospital (arrived ER at AM one o’clock)

- Risk Factor : HTN, Previous MI

- ECG : sinus rhythm, no significant ST-T change

- EchoCG : ICMP, mild LV systolic dysfunction (LVEF 45%)

- Initial vital sign : Blood pressure 80/60 mmHg
Chest CT
Diagnosis

- Ruptured Descending Thoracic Aortic Aneurysm

✓ Treatment Option
- TEVAR versus Open surgical repair
- We decided to perform emergency TEVAR
Femoral Angiography

Preclose technique with 2 proglides before 9Fr sheath insertion
Thoracic and abdominal aortography
Thoracic aortogram

C: 12.33 mm
A: 35.02 mm
B: 50.23 mm
Positioning of Thoracic Stent Graft
Seal thoracic stent graft (46x200mm)
Thoracic Stent Graft

Seal thoracic stent graft (46x150mm) – angled portion of descending thoracic aorta
Final aortography

No evidence of Type I and Type III endoleak
F/U CT angiography

F/U CT - 2 days

F/U CT – 6 months
TEVAR versus Open repair for dRDTAA

Meta-analysis of open versus endovascular repair for ruptured descending thoracic aortic aneurysm

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- 30 days mortality
  - Open surgical repair: 33%
  - TEVAR: 17%

- 3YR aneurysm-related survival
  - TEVAR: 71%
TEVAR for rDTAA

- Risks of Endograft-related complications may be increased after emergency procedures, because physicians in this setting can only use those endografts that are available on the shelf stock, and urgent situations may not allow optimal endograft sizing and deployment.
Strategy of TEVAR for rDTAA

- Cooperation with device company in emergency TEVAR

1. Patient diagnosed as rDTAA
   - CT images to Endovascular specialist in company (webhard upload)
   - Different sizes of stent grafts that is the most adequate to patient
   - Arrives at the hospital
   - Procedures before stent graft
     - Goal: Door to graft time <2hours
   - Stent graft with optimal size (diameter and length)
Thank you for your attention!