

Antegrade Endovascular Aortic Repair After Rupture of the Descending Aorta in the Setting of Surgical Repair for Type A Aortic Dissection

Mohamed Hassan, Kiril Penov, Dejan Radakovic, Nodir Madrahimov, Ivan Aleksic, Khaled Hamouda.
Department of Thoracic & Cardiovascular Surgery, Julius-Maximilians-University Hospital of Wuerzburg, Würzburg, Germany

BACKGROUND

Acute Type A Aortic Dissection (AAAD): A serious cardiovascular disease with high in-hospital mortality.
Common Causes of In-Hospital Mortality: Cardiac failure, multiorgan failure, neurological deficit, and aortic rupture.
Focus: Early descending thoracic aortic rupture during surgery for AAAD.

CASE PRESENTATION

Patient Demographics:

- 58-year-old male
- Presented with Glasgow Coma Scale of 9 after a syncopal episode
- one-day history of malaise & fatigue

Initial Findings:

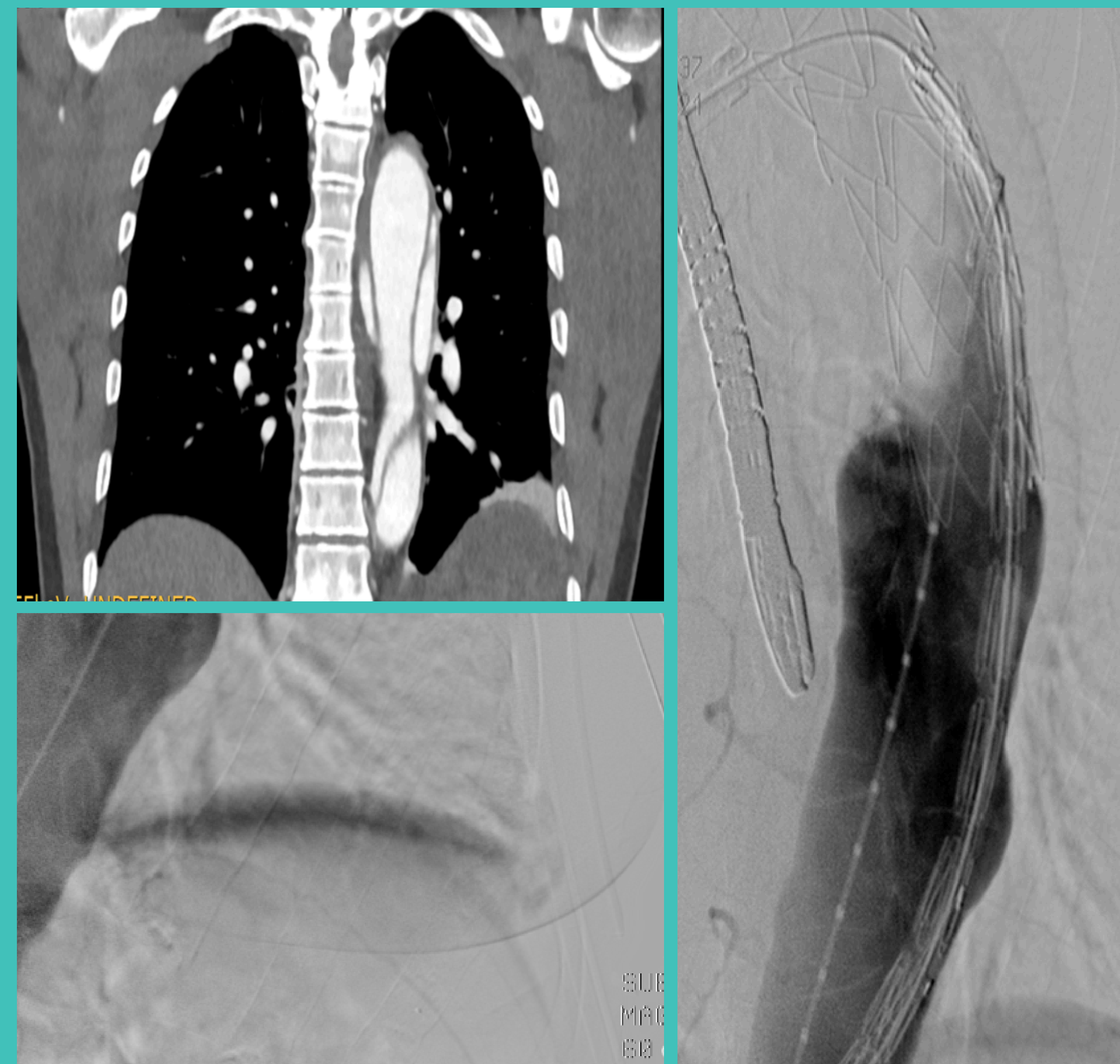
- Severe hypotension
- Moderate size pericardial effusion
- AAAD on CT angiography (CTA)

METHODS

Emergency Surgery:
Bentall procedure with replacement of the ascending aorta and aortic arch using frozen elephant trunk in deep hypothermic circulatory arrest.

Complication:
Massive volume loss during rewarming
Bloody left pleural effusion

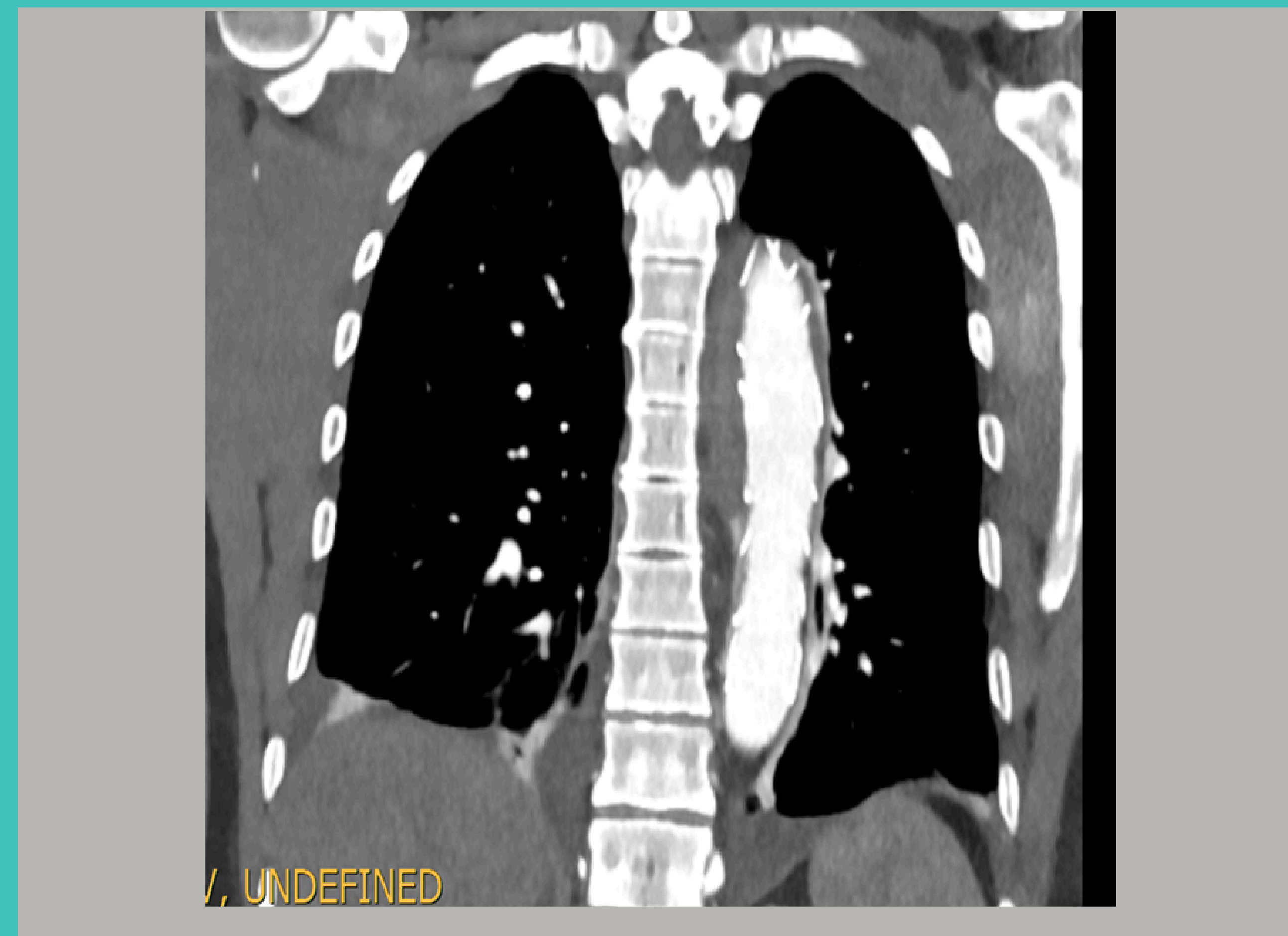
Diagnosis:
Emergency aortography using a pig tail catheter inserted through the ascending aortic graft indicated rupture of the descending thoracic aorta.



Intervention:
Emergency thoracic endovascular aortic repair (TEVAR) to seal the rupture.

Surgical Approach
Emergent diagnosis and intervention during the rewarming period.
TEVAR performed through the ascending aortic graft.

Stabilization:
Hemodynamic stabilization with volume substitution and vasopressors.



RESULTS & DISCUSSION

Postoperative Outcomes:

- Abrupt stabilization after TEVAR.
- Uneventful postoperative course.
- Extubation on the 2nd postoperative day without neurological insult.

CONCLUSION

- TEVAR can be a life-saving intervention for descending aortic rupture during AAAD surgery.
- Early recognition and rapid intervention are critical

CONTACT

Mohamed Hassan FEBCTS, FEBCTS-CVSCC
Dept. Thoracic and Cardiovascular Surgery Center,
Julius-Maximilians-University Hospital, Germany

Mob:0931 201 33092 Email: hassan_m@ukw.de