EMERGENT ENDOVASCULAR TREATMENT OF A RARE CASE OF STREPTOCOCCUS EQUI-RELATED AORTIC RUPTURE:

COULD A BALLOON EXPANDABLE AORTIC STENT GRAFT REPRESENT A VALID ALTERNATIVE DEVICE?

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Disclosure

Speaker name: ..........PAOLA SCRIVERE...................................................................

I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
A 59 yo male patient referred to emergency room for:

- **Sudden back pain**

- **Hypotension**

- **Increased inflammatory markers**
  (white cell count of $31,63 \times 10^3/\mu L$, haemoglobin was 8.4 g/dL, C-reactive protein (CRP) was 180.06 mg/L)

- **eFAST**: abdominal hematoma in a suspect of aortic rupture
Thoraco-abdominal Angio-CT scan

• Non-aneurysmal aortic rupture at the level inferior mesenteric artery.

• Regular Proximal aortic neck: 17.5 mm

• Aortic carrefour diameter: 20 mm

SUSPECTED INFECTION EMBOLISM ASSOCIATED TO AORTIC PSEUDOANEURYSM EVOLUTION
Urgent Bridging Endovascular Procedure

Focal Aortic Rupture 2.5 cm above the aortic carrefour. Small Aortic Diameter.

Aortic Balloon Expandable Stentgraft BeGraft 20*48mm (distal aortic diameter: 19 mm).

Partial Exclusion of the aortic rupture.
Urgent Endovascular Procedure

Proximal extension: BeGraft 16*58mm (proximal aortic diameter: 15 mm)

Stentgraft molding: Balloon 20*58 mm

Final Angiogram: Complete exclusion
Post-operative angio-CT scan

- An empiric intravenous antibiotic therapy was started.
- Negative Blood Cultures
- Adequate exclusion of aortic rupture + huge retroperitoneal non-infected Haematoma
- CT-PET did not confirm the suspected infection.
- Decreased inflammatory index
- At 6th post-operative day the patient was discharged
SYMPTOMS:
• Hyperpyrexia and septic
• Blood cultures: Streptococcus Equi (Beta haemolytic group C Str., an opportunistic commensal in horses)
• Anamnesis: patient was living in a small farm with 2 horse.
• Angio-TC + Lumbar MRI.

INFECTION TREATMENT:
• A long-term (45 days) targeted antibiotic therapy ev (Fosfomycin and Penicillin G). At dismissal: Amoxicillin/clavulanic acid and Dalbavancin. (4 months)
• Ileo-psoas abscess drainage (1 month)
• Local cycle of ozone therapy

30 days Follow Up
FU angio-CT scan
Lumbar MRI
3 years FU: Control angio-CT scan

- 6 months aneurysmal aortic evolution at the level of previous aortic rupture (diameter 3 cm)
- Type IB EL
- Aortic stent graft crushing. (low radial forces: balloon expandable stent graft)
- The PET CT excluded any signs of residual / endograft and retroperitoneal infection.
Tricky engagement of aortic lumen (stent graft compression and Type IB EL)

Positioning Of Dryseal Introducer 18F- 33 cm at the level of Renal Arteries and releasing of main body RLT Gore 231414 (gate at the level of Begraft Aortic compression)

Controlateral gate engagement Positioning and releasing of controlateral and omolateral Kissing balloon with Reliant at the flow divider
Post-procedural intraoperative control

FINAL ANGIOGRAM

CONE-BEAM CT
12 months angio-CT scan

- Successful relining
- No endograft iliac branch compression
- No signs of EL
- No signs of infection
CONCLUSIONS

• In case of infection-related aortic rupture, a bridging endovascular procedure could be the first line treatment

• In case of small aortic diameter and the lack of aortic cuff with small diameter, balloon expandable stent graft could be a feasible bail-out solution

• Taking into account the risk of crushing or inadequate sealing.

• Strict FU: pseudoaneurysmal evolution, new active infection
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