VA ECMO After Homograft Repair for Aortic Valve Endocarditis with Root Abscess

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HPI

• 44 year old male
• 2 previous operations for Aortic Endocarditis
  • 2002 – Homograft repair and VSD closure
  • Post-op pacemaker placement
  • 2011 – Redo sternotomy, 20mm ATS mechanical valve replacement and aortoplasty
• Admitted November with fever, chills, diarrhea
  • TTE showed vegetation on pacer lead
  • Pacer removed
  • VF arrest – resuscitated
  • Transvenous pacemaker placed
  • Transferred to Abbott NW
• TEE and CT showed aortic root abscess

OR

• Right femoral vessels were exposed
• Redo sternotomy
• Central aortic and femoral venous cannulation
• Old homograft and ATS valve removed
• Redo Homograft
• Weaned from bypass and closed
• VF arrest on transfer from OR table to ICU bed
• Sternum reopened, resuscitated, no obvious problems
• Aortic balloon pump placed
• Cath lab for diagnostic angiogram

TEE images

Angiogram
Cath lab

- Left main ostial narrowing
- Hemodynamically labile
- Peripheral VA ECMO support during high risk PCI
  - Distal arterial perfusion catheter
- Successfully stented
- Transferred to SICU

Post Stent Placement

Post-op course

- POD 0 – Hypotensive requiring blood transfusion and multiple vasopressors
  - Significant bleeding from groin cannulation site
  - Explored at bedside and controlled
- POD 3 – Bedside TTE and ECMO wean
  - Adequate hemodynamics
  - Good bi-ventricular function
- POD 4 – ECMO decannulated
- POD 6 – Extubated
- POD 8 – Transferred to telemetry floor
- POD 20 – Transferred to rehab facility

Questions

- Pre-operative coronary angiogram?
- Distal perfusion catheter
- Perfusion of the coronaries, head vessels and visceral vessels on femoral ECMO
- VA ECMO support
  - High risk PCI?
  - eCPR
  - Out of hospital VT/VF arrests