### A Modified Technique of Annular Enlargement with Valve Repair in a Patient with TOF

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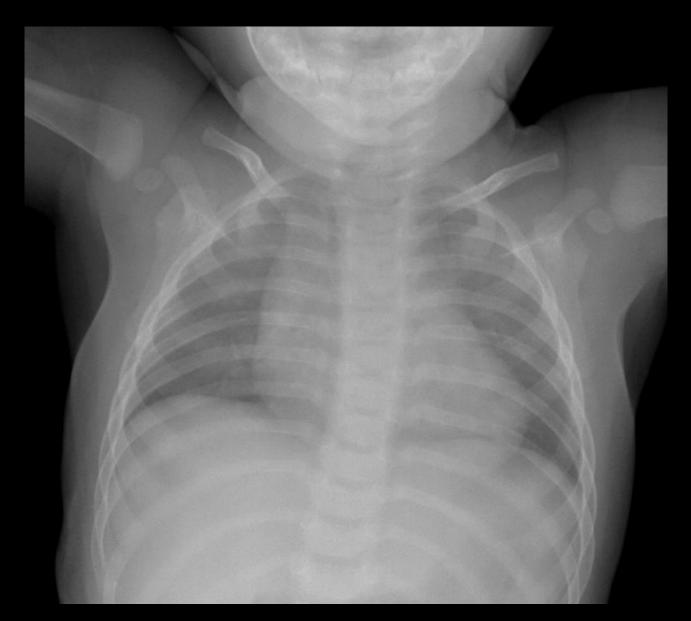




# **Brief history**

- GA 38+3 weeks, 2.4kg, female
- Diagnosis: TOF
- Admission for total repair
  - 5 months old, 6.2kg
  - SpO2: 91%

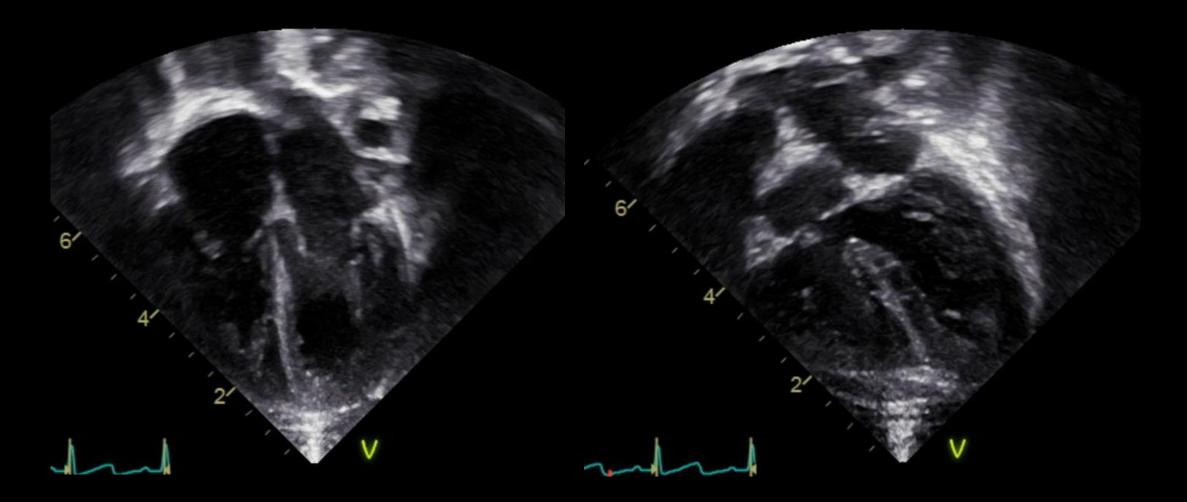
# Preop. CXR



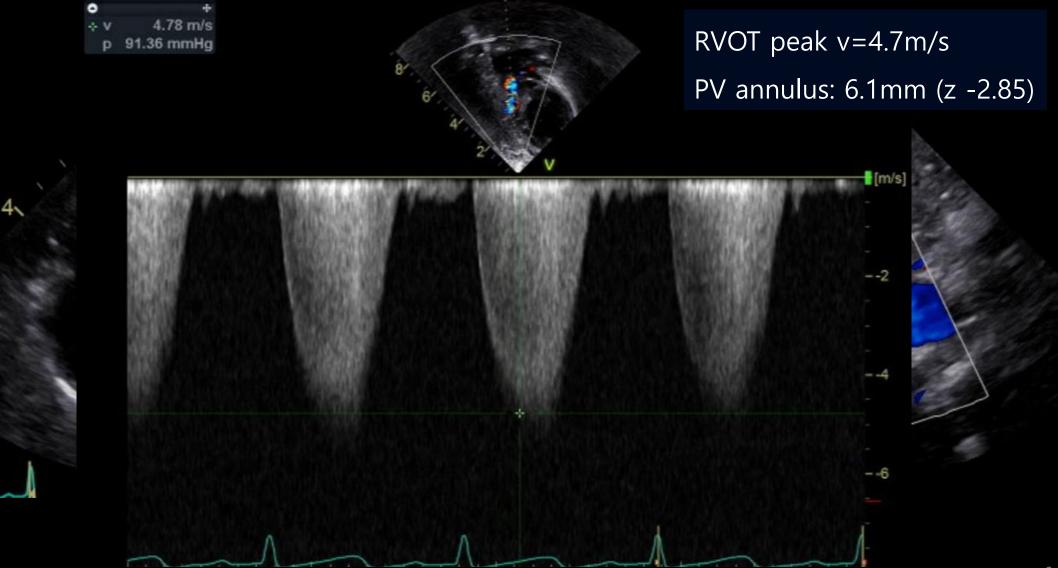
# Preop. EKG

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# Preop. echo

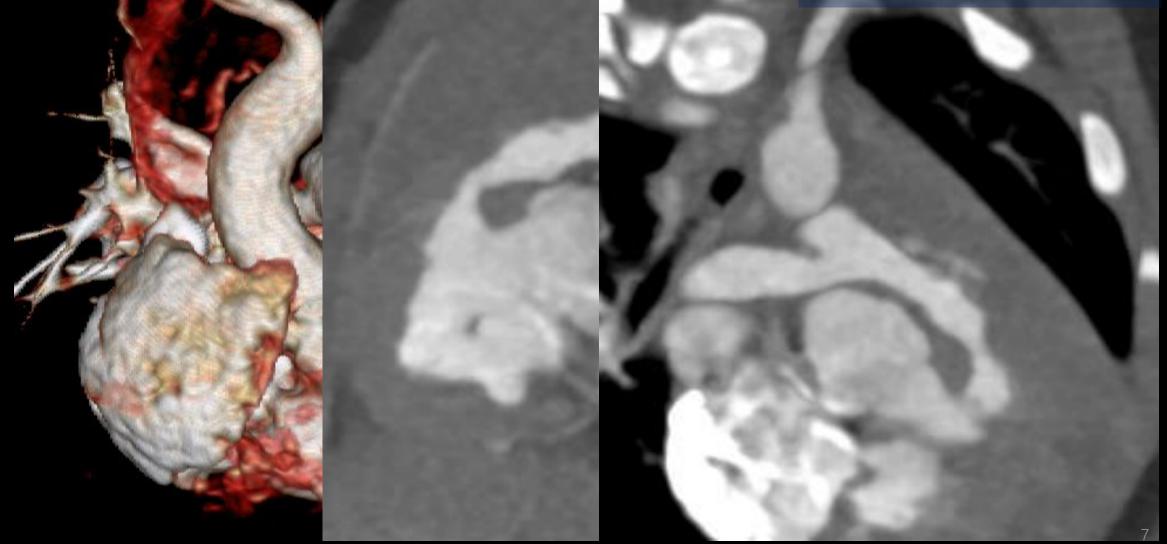


## Preop. echo



# Preop. CT

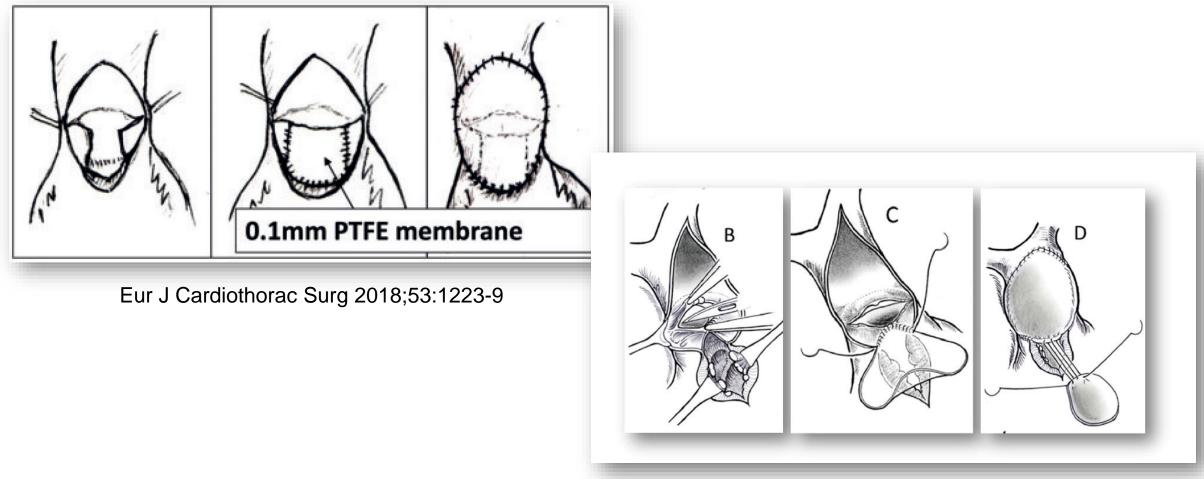
PV annulus: 5.7mm Small MPA: 4.0mm



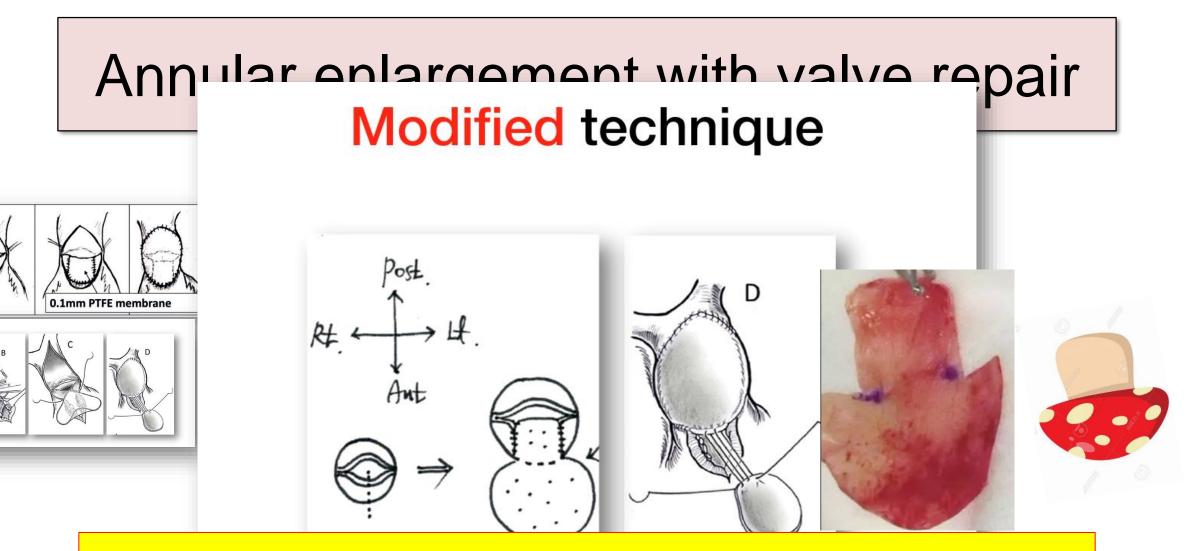
# TOF with small PVA

- Concept: The optimal PVA diameter for annular preservation (AP) is smaller than expected.
- Options for annular enlargement
  - Trans-annular RVOT widening (m/c)
  - Systemic to pulmonary artery shunt prior to repair
  - Annular enlargement with valve repair

## Annular enlargement with valve repair



Ann Thorac Surg 2014;98:1850-2



#### <Patient selection criteria>

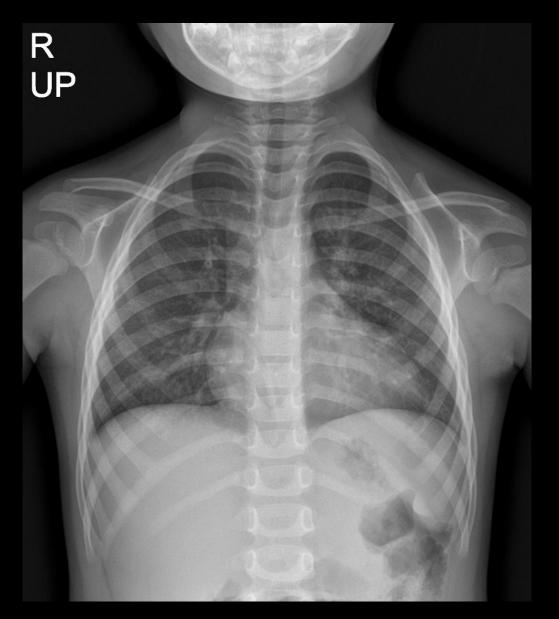
- 1. Transversely oriented commissures
- 2. Marginally small pulmonary valve annulus. (The patch should not cover too much)

# **TOF** 5m/F 6.2 kg

# **Brief history**

- Hospital course
  - POD #1 general ward transfer
  - POD #5 discharge

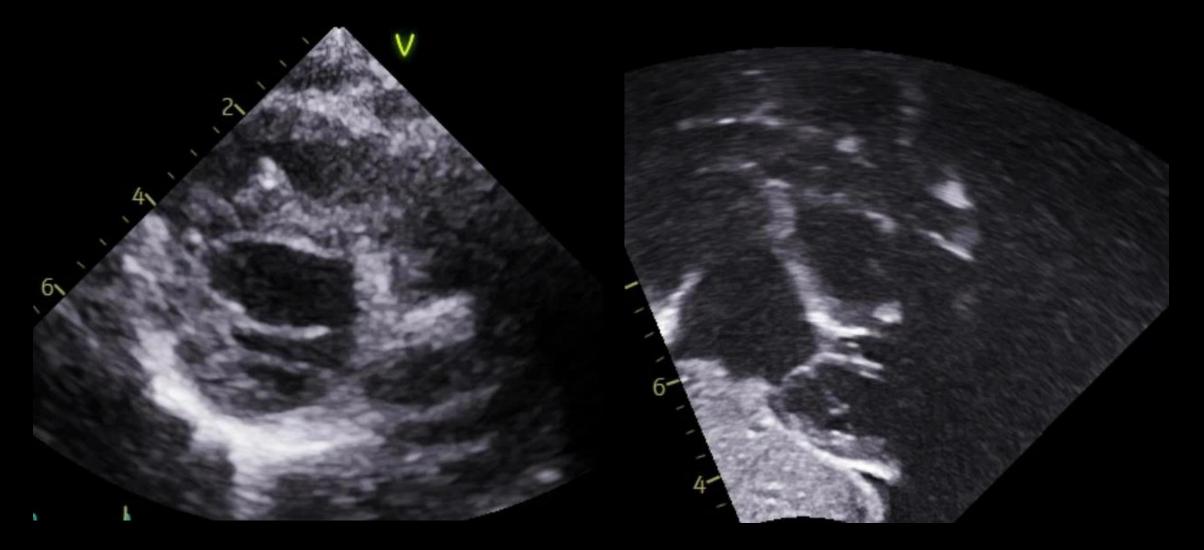
# FU CXR (2y8m after op)



# FU echo (2y8m after op)

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# FU echo (2y8m after op)



<Parasternal short-axis view>

<Subcostal view>

## Conclusion

- A modified technique of pulmonary annular enlargement with valve repair can be considered as a surgical option in highly selected patients with TOF.
- Long-term F/U is warranted to assess its durability.

# Thank you for your attention!