

# Recurrent Ventricular Tachycardia in a patient with LV aneurysm

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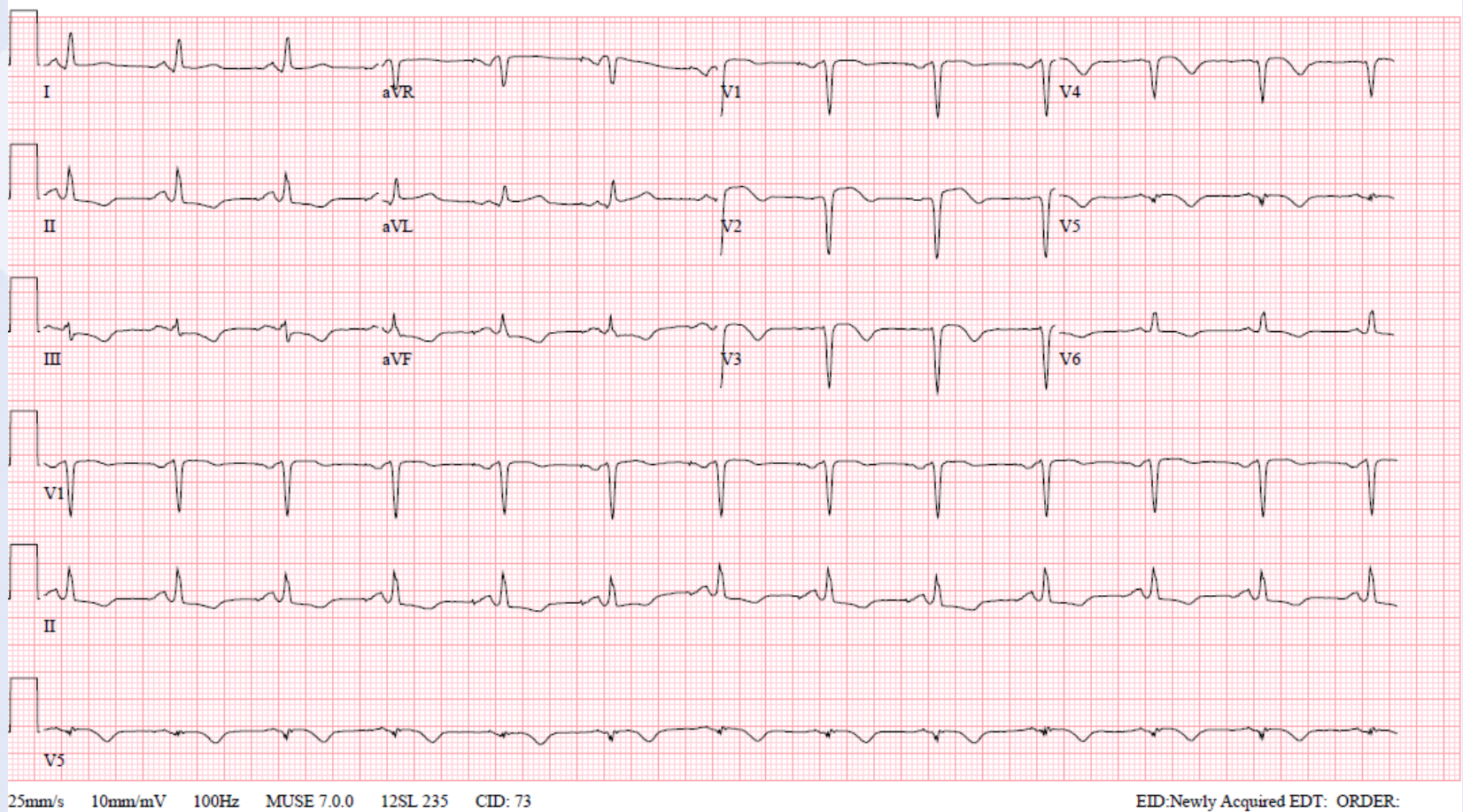
# Case Presentation

- A 75 year old man
  - Multiple episodes of VT
  - Class II-III CHF
  - No Angina
- PMH - Extensive anterior wall STEMI in 1977
- No previous cardiac catheterization
- Echo - large apical LV aneurysm

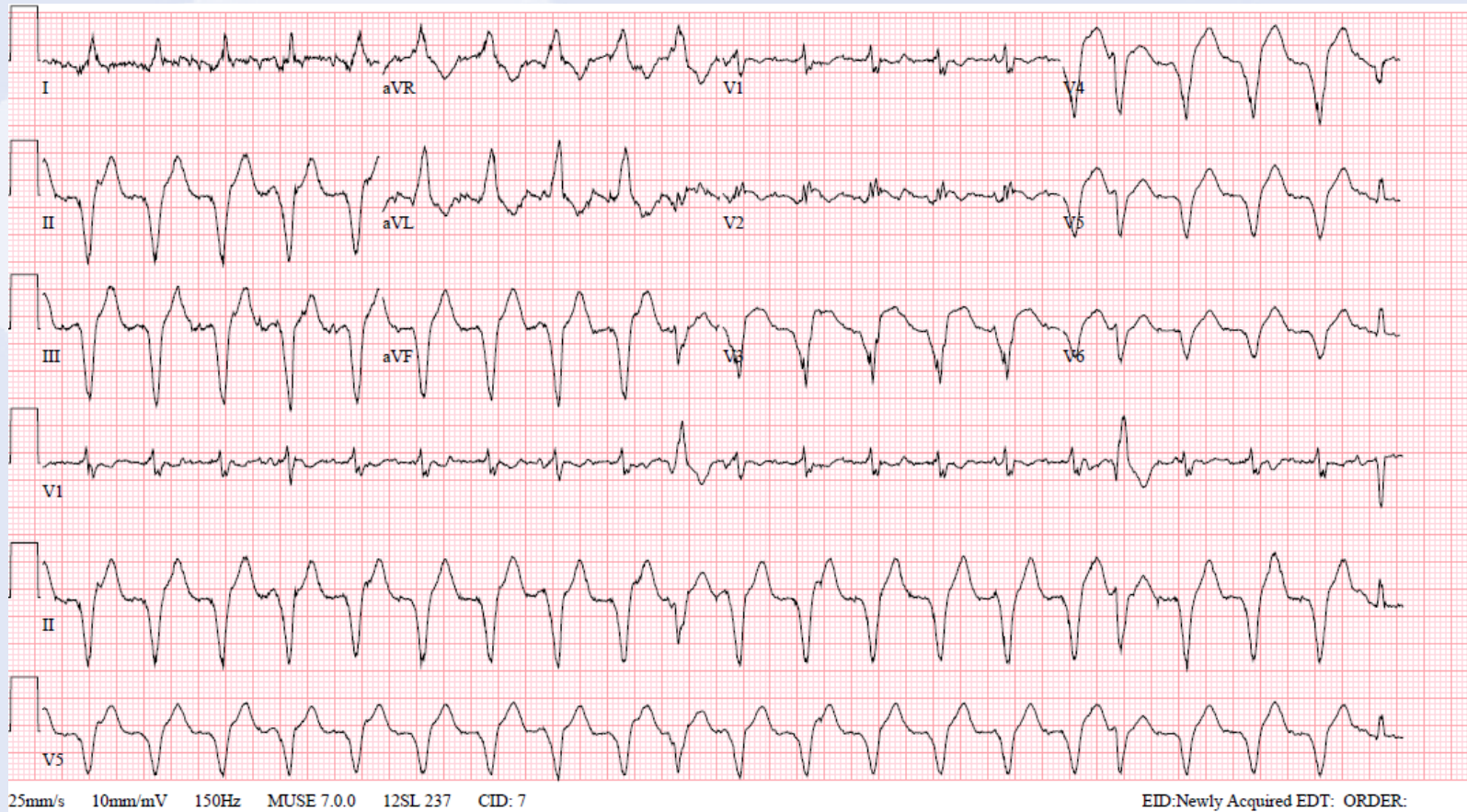
# EP History

- 1995 - PAF → Cardioversion
- 1995 - EP study → inducible VT → AICD
- 2012
  - LV aneurysm Endocardial VT ablation for recurrent VT
  - Medical Tx - Amiodarone and Metoprolol
  - Echo - LV apical thrombus (known since 1995 and calcified) → Warfarin

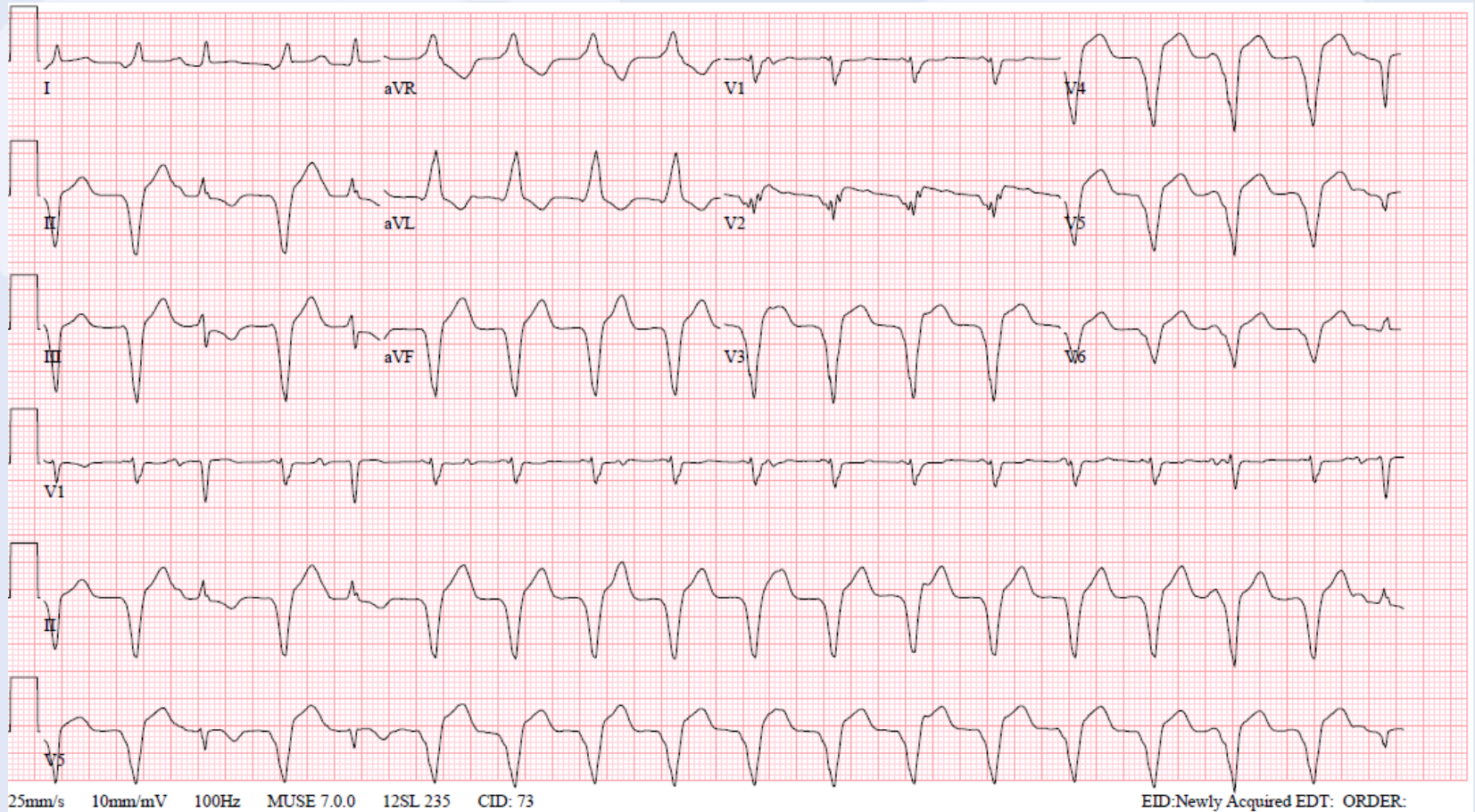
# ECG – Sinus Rhythm



# ECG – VT - presentation



# Slow VT on IV Amiodarone



# Physical Examination Upon Admission

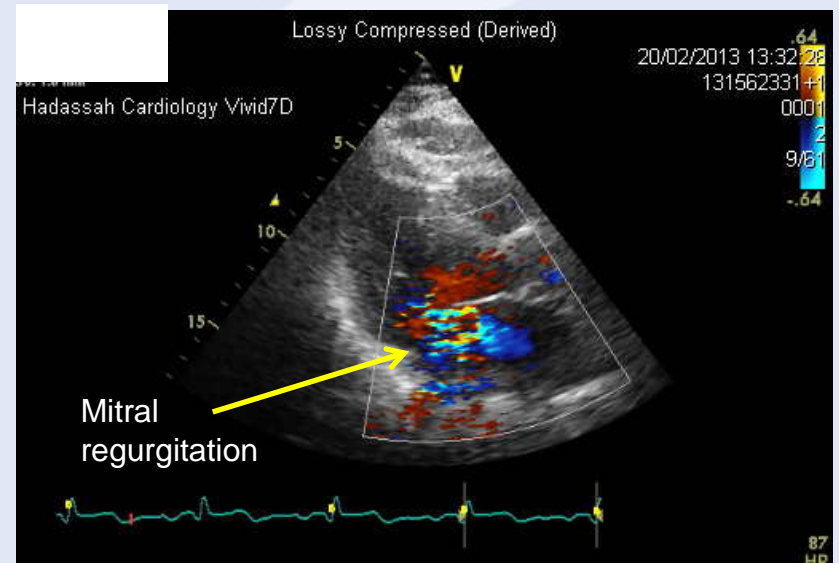
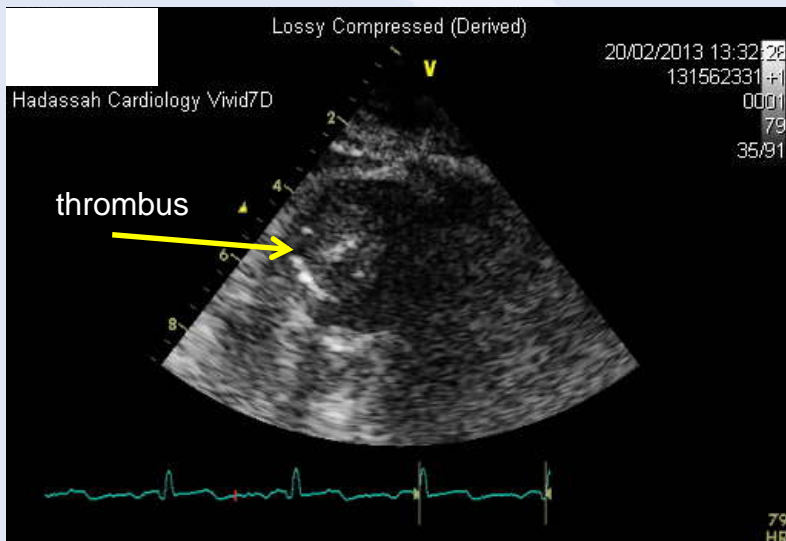
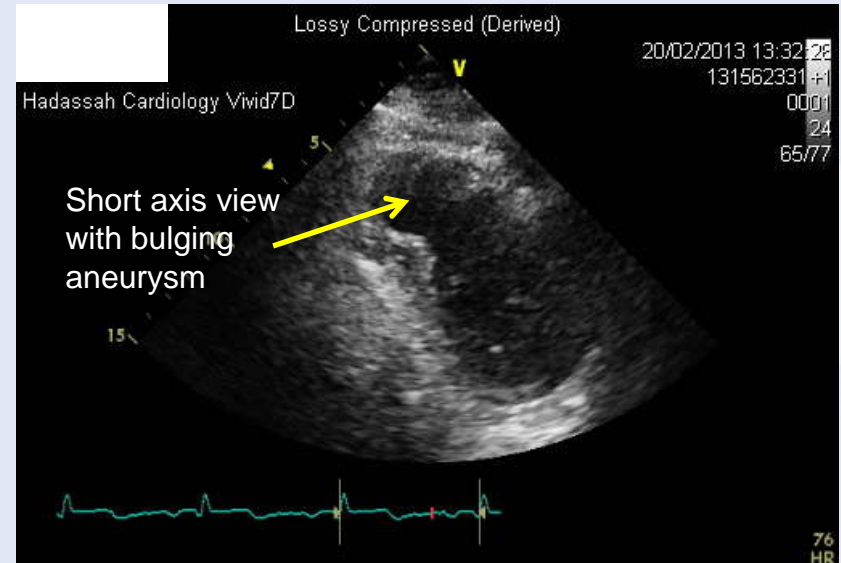
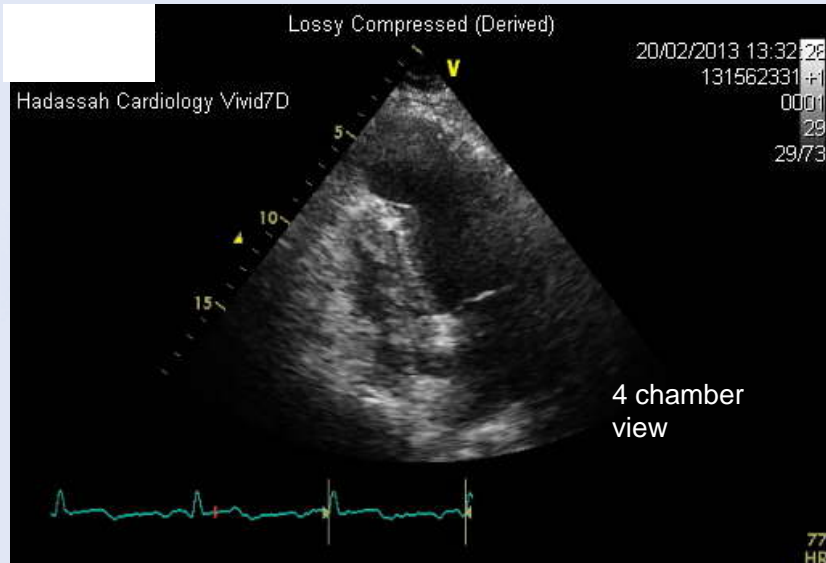
- Elderly male weak, anxious in apparent distress and SOB
- BP 120/70 mmHg

# Immediate Treatment

- Termination of VT by AICD synchronized cardioversion
- Recurrence within minutes
- IV Amiodarone 150mg with reloading (total 1 gram)



# Echocardiogram



# Hospitalization Course

- Medical Treatment
  - IV Amiodarone re-loading, maintenance with 400 mg/d
  - Metoprolol 50 mg BID
- Alternating rhythm
  - Episodes of rapid VT with repeated cardioversions
  - Slow VT (105 bpm)
- Mild renal failure (creatinine 120  $\mu\text{mol/L}$ )
- The patient remained weak and anxious

# Further Evaluation

- Coronary Angiography - insignificant coronary disease
- Repeat EP study contraindicated due to LV thrombus
- Surgical consultation

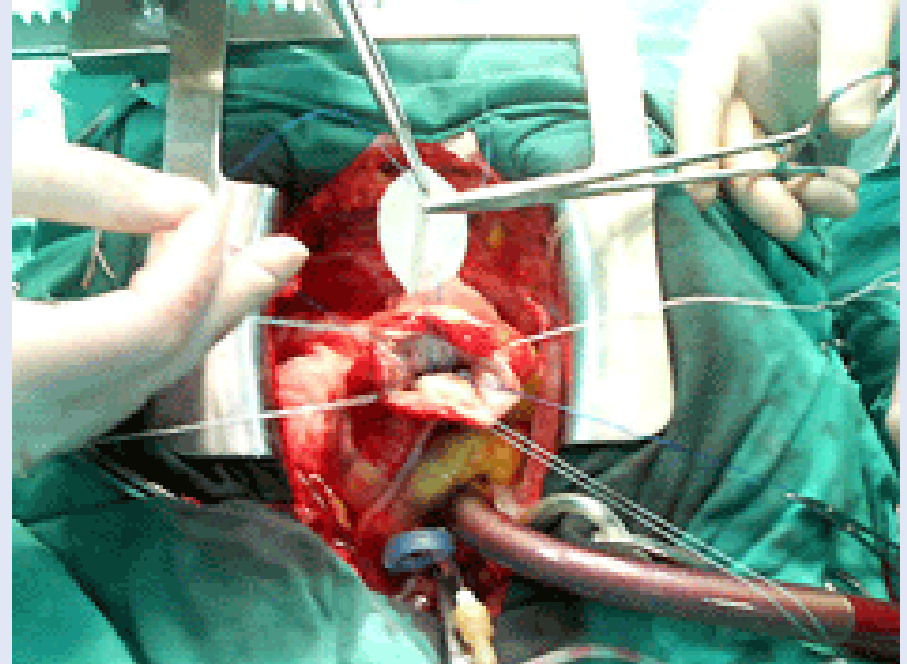
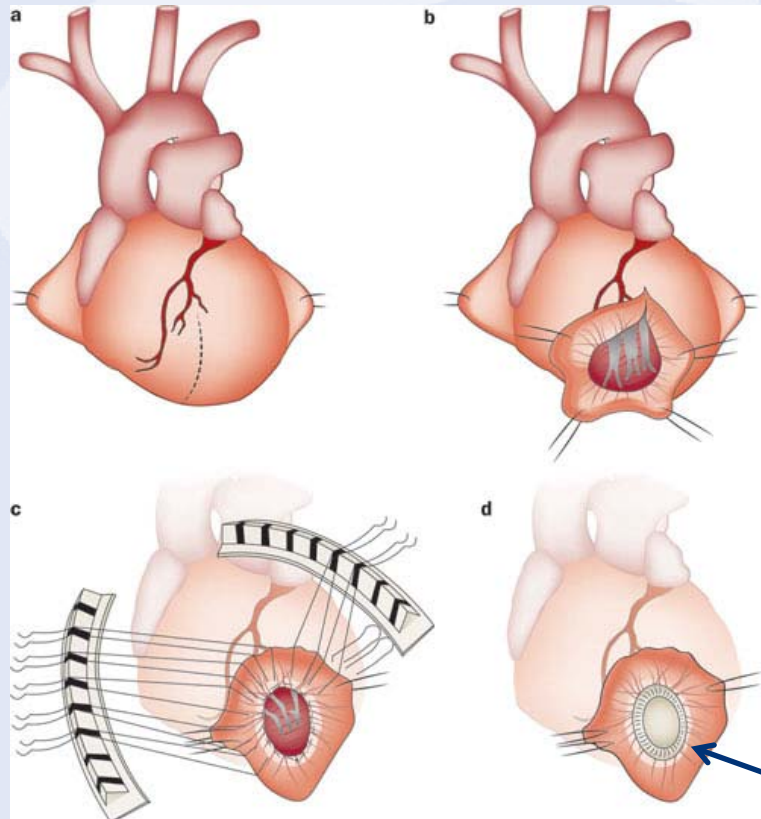
# Cardiac catheterization



# The Operation

- Cardiopulmonary bypass with cardioplegic arrest
- LV Aneurysm
  - Removal of thrombus
  - Dor`s repair – endoaneurysmorrhaphy using a bovine pericardial patch
- VT
  - Cryoablation of the entire border zone
- MR
  - Mitral valve repair with an undersized Physio ring

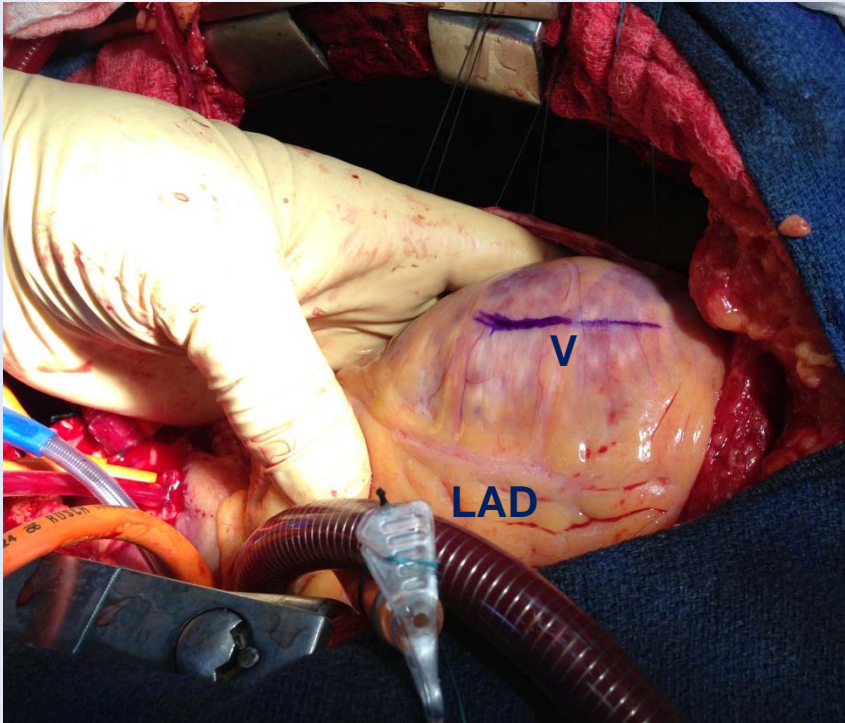
# Dor's Procedure



Pericard patch



# Surgery



**LV Aneurysm**  
V=Ventriculotomy line



**LV Clot**

# Post-operative course

- Uneventful recovery
- No episodes of VT since the operation
- Follow up
  - The patient is at home
  - NYHA class II



# Discussion

- Left ventricular aneurysm is a rare clinical-pathological entity in the revascularization era
- 15% of patients with LV aneurysm present with serious ventricular arrhythmias
- Surgical repair of LVA is indicated for Intractable CHF, Angina, systemic embolization and VT
- Early operative mortality - 5-10%
- Elimination of VT – 59-99%

