

# Heart Failure

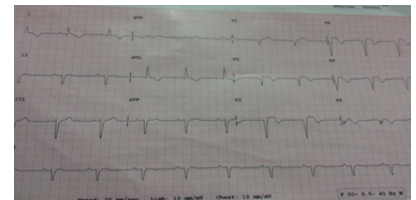
## Heart Failure Surgery

### Case Presentation:

A 66-years, Tazakistan native male patient, normotensive, non-diabetic, had complaint of dyspnea on exertion NYHA class III/IV with occasional complains of orthopnea and PND. Patient had oedema on legs, had single kidney with altered Renal Function Test.

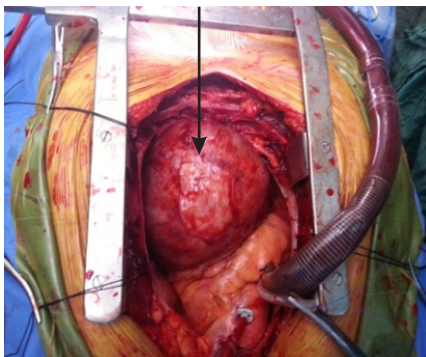
### Diagnosis and Management:

Patient consulted to cardiologist at Tazakistan and CAG was done, which was suggestive of Double Vessel disease(DVD) with LAD-100% and RCA-90%. 2D echo was done which was suggestive of dilated LV, severe LV systolic dysfunction with LVEF: 20%, akinesia of distal IVS, apex and part of anterior wall with large apical aneurysm, LV apical clots, mild MR, AR, TR and mild PAH, RVSP : 40 mm Hg, grossly dilated LV volume 383/334(LV diastolic dimensions - 75 mm and LVSD – 68 mm). So, patient was advised for CABG with SVR (Surgical Ventricular Restoration). Patient was medically optimized and then taken up for surgery. Patient was put On pump and then grafting was done (SVG to RCA) on an arrested heart. LV apex was opened. LV clot removed and cleared and calcified LV



PRE OPERATIVE ECG

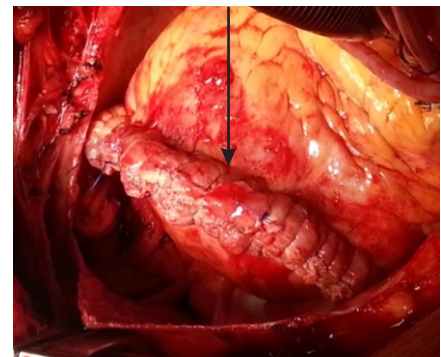
LV ANUERYSM



OPEN LV



REPAIRED LV



excess Myocardium was excised. With the help of LV sizer, LV was again given reshape, resized and restoration was done. LV volume was reduced from 383ml to 185ml. LV was closed in 2 layers using 3 prolene with felt. Patient was weaned off-Bypass with minimum inotropic support. IABP support was not required.

## **Outcome:**

Post operatively patient was shifted to SICU and kept on ventilator. Patient remained stable and routine extubation was done on the next day. Patient was shifted to ward with vital stable condition. Remaining post-operative stay of the patient was uneventful. Patient was discharged with stable hemodynamic condition on 12th post op day. Patient on discharge had 2D ECHO finding of dilated LV, severe LV systolic dysfunction LVEF : 25-30 %, akinesia of distal IVS apex and part of anterior wall, SVR patch seen in situ, reduced LV compliance, Mild AR, Mild TR, RVSP : 30 mm Hg. At 6 month follow up patient was in NYHA class-II and was enjoying a good life. He is able to walk 2-3 km.



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## **Conclusion:**

Acute MI of LAD and RCA territories can cause massive damage to LV apex and anterior and inferior wall of LV. In few cases, this can lead to massive LV apical aneurysm. This aneurysm cavity gradually fills up with blood clots because of stasis blood in aneurysm. This aneurysm causes remodeling of adjacent myocardium leading to severe overall LV dysfunction with reduced cardiac output and overall sign and symptoms of heart failure.

Treating this aneurysm by excising it and then giving a normal shape, size and orientation to LV myocardium can improve overall myocardial contractility, reversing the remodeling process and ultimately improving cardiac output and improving the symptomatic status. This SVR procedure can improve morbidity of patient and quality of life.