

## Case Study

**PHYSICIAN:** Steven W. Boyce, M.D.

**LOCATION:** Washington Hospital Center, Washington D.C.

**CASE HIGHLIGHT:** 48 year old previously stented patient, requiring no further revascularization, benefits from Surgical Ventricular Restoration (SVR<sup>®</sup>).

### Patient History

Patient is a 48 year old male who suffered an anteroseptal myocardial infarction in April 1997 at a local hospital. He was transferred to Washington Hospital Center and underwent stent angioplasty to the left anterior descending artery. He developed recurrent angina four years later, and a follow-up catheterization revealed a widely patent LAD, with no further progression of his coronary artery disease. His medications were adjusted, and he did well until June 2002 when he developed rest angina. Cardiac catheterization at that time revealed minimal luminal irregularities with continued patency of the stented LAD. However, the ventriculogram revealed a dilated and globular left ventricle (LV), with a moderate to large anteroapical aneurysm. The overall LVEF was 30% by catheterization, with mild pulmonary hypertension but no mitral regurgitation or LV thrombus. In light of his coronary anatomy revealing the absence of flow limiting disease, his anginal symptoms were attributed to the expanding aneurysm.

The patient continued to complain of shortness of breath with moderate exertion and occasional chest pain. He underwent evaluation for cardiac transplantation, but was deemed ineligible due to an abnormal but non-qualifying MVO<sub>2</sub> test. He was then referred for Surgical Ventricular Restoration procedure. A baseline 2D ECHO revealed a LVEDD of 6.2 cm, an estimated LVEF of 20-25%, and an anteroapical aneurysm. The patient's other medical history is remarkable for hypertension, hyperlipidemia, and a family history of heart disease. He quit smoking 20 years previously.

### Case Data

	PRE-OPERATIVE	ONE MONTH POST-OPERATIVE
NYHA (I-IV)	II	I
LVEDV (ml)	240	162
LVEDVI (ml/m <sup>2</sup> )	97.6	63.5
LVESV (ml)	173	103
LVESVI (ml/m <sup>2</sup> )	67.8	40.4
LVEF (%)	30	36
Eccentricity Index	0.66	0.77
Long Axis	101	78
Short Axis	67	60
MR (0-4+)	0	0
Area of asynergy (% of endocardium border not moving)	43	3

### Post-operative Course

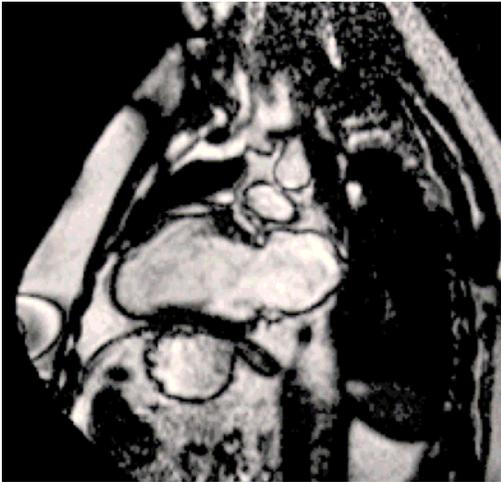
ICU length of time: 1 day

Total hospital length of stay: 4 days

### Outpatient Follow-up at One Month Post-OP

The patient presented as NYHA Class I and states he has more energy and physical endurance than he's had in years.

### Pre-operative and Post-operative Images



Pre-op



Post-op