PROCEDURE PERFORMED:,1. Right heart catheterization.,2. Left heart catheterization.,3. Left ventriculogram.,4. Aortogram.,5. Bilateral selective coronary angiography.,ANESTHESIA:, 1% lidocaine and IV sedation including Versed 1 mg.,INDICATION:, The patient is a 48-year-old female with severe mitral stenosis diagnosed by echocardiography, moderate aortic insufficiency and moderate to severe pulmonary hypertension who is being evaluated as a part of a preoperative workup for mitral and possible aortic valve repair or replacement. She has had atrial fibrillation and previous episodes of congestive heart failure. She has dyspnea on exertion and occasionally orthopnea and paroxysmal nocturnal dyspnea.,PROCEDURE:, After the risks, benefits, and alternatives of the above-mentioned procedure were explained to the patient in detail, informed consent was obtained, both verbally and in writing. The patient was taken to the Cardiac Catheterization Lab where the procedure was performed. The right inguinal area was thoroughly cleansed with Betadine solution and the patient was draped in the usual manner. 1% lidocaine solution was used to anesthetize the right inguinal area. Once adequate anesthesia had been attained, a thing wall Argon needle was used to cannulate the right femoral vein. A guidewire was advanced into the lumen of the vein without resistance. The needle was removed and the guidewire was secured to the sterile field. The needle was flushed and then used to cannulate the right femoral artery. A guidewire was advanced through the lumen of the needle without resistance. A small

nick was made in the skin and the needle was removed. This pressure was held. A #6 French arterial sheath was advanced over the guidewire without resistance. The dilator and guidewire were removed. FiO2 sample was obtained and the sheath was flushed. An #8 French sheath was advanced over the guidewire into the femoral vein after which the dilator and guidewire were removed and the sheath was flushed. A Swan-Ganz catheter was advanced through the venous sheath into a pulmonary capillary was positioned and the balloon was temporarily deflated. An angulated pigtail catheter was advanced into the left ventricle under direct fluoroscopic visualization with the use of a guidewire. The guidewire was removed. The catheter was connected to a manifold and flushed. Left ventricular pressures were continuously measured and the balloon was re-inflated and pulmonary capillary wedge pressure was remeasured. Using dual transducers together and the mitral valve radius was estimated. The balloon was deflated and mixed venous sample was obtained. Hemodynamics were measured. The catheter was pulled back in to the pulmonary artery right ventricle and right atrium. The right atrial sample was obtained and was negative for shunt. The Swan-Ganz catheter was then removed and a left ventriculogram was performed in the RAO projection with a single power injection of non-ionic contrast material. Pullback was then performed which revealed a minimal LV-AO gradient. Since the patient had aortic insufficiency on her echocardiogram, an aortogram was performed in the LAO projection with a single power

injection of non-ionic contrast material. The pigtail catheter was then removed and a Judkins left #4 catheter was advanced to the level of the ascending aorta under direct fluoroscopic visualization with the use of a guidewire. The guidewire was removed. The catheter was connected to the manifold and flushed. The ostium of the left main coronary artery was carefully engaged. Using multiple hand injections of non-ionic contrast material, the left coronary system was evaluated in different views. This catheter was then removed and a Judkins right #4 catheter was advanced to the level of the ascending aorta under direct fluoroscopic visualization with the use of a guidewire. The guidewire was removed. The catheter was connected to the manifold and flushed. The ostium of the right coronary artery was then engaged and using hand injections of non-ionic contrast material, the right coronary system was evaluated in different views. This catheter was removed. The sheaths were flushed final time. The patient was taken to the Postcatheterization Holding Area in stable condition.,FINDINGS:,HEMODYNAMICS: , Right atrial pressure 9 mmHg, right ventricular pressure is 53/14 mmHg, pulmonary artery pressure 62/33 mmHg with a mean of 46 mmHg. Pulmonary capillary wedge pressure is 29 mmHg. Left ventricular end diastolic pressure was 13 mmHg both pre and post left ventriculogram. Cardiac index was 2.4 liters per minute/m2. Cardiac output 4.0 liters per minute. The mitral valve gradient was 24.5 and mitral valve area was calculated to be 0.67 cm2. The aortic valve area is calculated to be 2.08 cm2.,LEFT VENTRICULOGRAM: , No segmental

wall motion abnormalities were noted. The left ventricle was somewhat hyperdynamic with an ejection fraction of 70%. 2+ to 3+ mitral regurgitation was noted.,AORTOGRAM: , There was 2+ to 3+ aortic insufficiency noted. There was no evidence of aortic aneurysm or dissection.,LEFT MAIN CORONARY ARTERY: , This was a moderate caliber vessel and it is rather long. It bifurcates into the LAD and left circumflex coronary artery. No angiographically significant stenosis is noted.,LEFT ANTERIOR DESCENDING ARTERY:, The LAD begins as a moderate caliber vessel _____ anteriorly in the intraventricular groove. It tapers in its mid portion to become small caliber vessel. Luminal irregularities are present, however, no angiographically significant stenosis is noted.,LEFT CIRCUMFLEX CORONARY ARTERY: , The left circumflex coronary artery begins as a moderate caliber vessel. Small obtuse marginal branches are noted and this is the nondominant system. Lumen irregularities are present throughout the circumflex system. However no angiographically significant stenosis is noted.,RIGHT CORONARY ARTERY: , This is the moderate caliber vessel and it is the dominant system. No angiographically significant stenosis is noted, however, mild luminal irregularities are noted throughout the vessel.,IMPRESSION:,1. Nonobstructive coronary artery disease.,2. Severe mitral stenosis.,3. 2+ to 3+ mitral regurgitation.,4. 2+ to 3+ aortic insufficiency.