

PROCEDURE:, Left heart catheterization, left ventriculography, selective coronary

angiography.,INDICATION: , This lady with a previous left internal mammary graft to left anterior descending, saphenous vein graft to obtuse margin branch, saphenous vein graft to the diagonal branch, and saphenous vein graft to the right coronary artery presented with recurrent difficulties with breathing. This was felt to be related largely to chronic obstructive lung disease. She had dynamic T-wave changes in precordial leads. Cardiac enzymes were indeterminate. She was evaluated by Dr. X and given her previous history and multiple risk factors it was elected to proceed with cardiac catheterization and coronary angiography.,Risks of the

procedure including risks of conscious sedation, death, cerebrovascular accident, dye reaction, need for emergency surgery, vascular access injury and/or infection, and risks of cath-based interventions were discussed in detail. The patient understood and agreed to proceed.,DESCRIPTION OF THE

PROCEDURE: , The patient was brought to the cardiac catheterization laboratory. Under Versed and fentanyl sedation, the right groin was sterilely prepped and draped. Local anesthesia was obtained with 2% Xylocaine. The right femoral artery was entered using modified Seldinger technique and a 4-French introducer sheath placed in that vessel. Through the indwelling femoral arterial sheath, a JL4 4-French catheter was advanced over the wire to the ascending aorta, appropriately aspirated and flushed. Ascending aortic root pressures obtained. This catheter was

utilized in an attempt to cannulate the left coronary ostium. This catheter was too small, was exchanged for a JL5 4-French catheter, which was advanced over the wire to the ascending aorta, the cath appropriately aspirated and flushed, and advanced to left coronary ostium and multiple views of left coronary artery obtained., This catheter was then exchanged for a 4-French right coronary catheter, which was advanced over the wire to the ascending aorta. The catheter appropriately aspirated and flushed. The catheter was advanced in the right coronary artery. Multiple views of that vessel were obtained. The catheter was then sequentially advanced to the saphenous vein graft to the diagonal branch, saphenous vein graft to the obtuse marginal branch, and left internal mammary artery, left anterior descending coronary artery, and multiple views of those vessels were obtained. This catheter was then exchanged for a 4-French pigtail catheter, which was advanced over the wire to the ascending aorta. The catheter was appropriately aspirated and flushed and advanced to left ventricle, baseline left ventricular pressures obtained., Following this, left ventriculography was performed in a 30-degree RAO projection using 30 mL of contrast injected over 3 seconds. Post left ventriculography pressures were then obtained as was a pullback pressure across the aortic valve. Videotapes were then reviewed. It was elected to terminate the procedure at that point in time., The vascular sheath was removed and manual compression carried out. Excellent hemostasis was obtained. The patient tolerated the procedure without

complication.,RESULTS OF PROCEDURE,1.

,HEMODYNAMICS:, Left ventricular end-diastolic filling pressure was 24. There was no gradient across the aortic valve.,2.

,LEFT VENTRICULOGRAPHY: , Left ventriculography demonstrated well-preserved left ventricular systolic function. Mild inferobasilar hypokinesis was noted. No significant mitral regurgitation noted. Ejection fraction was estimated at 60%.,3. ,CORONARY ARTERIOGRAPHY,A.

,LEFT MAIN CORONARY: , The left main coronary was patent.,B. ,LEFT ANTERIOR DESCENDING CORONARY

ARTERY:, Left anterior descending coronary was occluded shortly after a very small first septal perforator was given.,C.

,CIRCUMFLEX CORONARY ARTERY:, Circumflex coronary artery was occluded at its origin.,D. ,RIGHT CORONARY

ARTERY,. Right coronary artery was occluded in its mid portion.,4. ,SAPHENOUS VEIN GRAFT ANGIOGRAPHY,A.

,SAPHENOUS VEIN GRAFT TO THE DIAGONAL BRANCH:

, The saphenous vein graft to diagonal branch was widely patent at its origin and insertion sites. Excellent flow was noted in the diagonal system with some retrograde flow.,B.

There was retrograde flow as well in the left anterior descending system.,C. ,SAPHENOUS VEIN GRAFT TO THE OBTUSE MARGINAL SYSTEM:, Saphenous vein graft to the obtuse marginal system was widely patent at its origin and insertion sites. There was no graft disease noted. Excellent flow was noted in the bifurcating marginal system.,D.

,SAPHENOUS VEIN GRAFT TO RIGHT CORONARY ARTERY:, Saphenous vein graft to right coronary was widely

patent with no graft disease. Origin and insertion sites were free of disease. Distal flow in the graft to the posterior descending was normal.,5. ,LEFT INTERNAL MAMMARY ARTERY ANGIOGRAPHY: , Left internal mammary artery angiography demonstrated a widely patent left internal mammary at its origin and insertion sites. There was no focal disease noted, inserted into the mid-to-distal LAD which was a small-caliber vessel. Retrograde filling of a small septal system was noted.,SUMMARY OF RESULTS,1. Elevated left ventricular end-diastolic filling pressure with normal left ventricular systolic function and mild hypokinesis of inferobasilar segment.