

PROCEDURE PERFORMED:,1. Left heart catheterization, left ventriculogram, aortogram, coronary angiogram.,2. PCI of the LAD and left main coronary artery with Impella assist device.,INDICATIONS FOR PROCEDURE: , Unstable angina and congestive heart failure with impaired LV function.,TECHNIQUE OF PROCEDURE: , After obtaining informed consent, the patient was brought to the cardiac catheterization suite in postabsorptive and nonsedated state. The right groin was prepped and draped in the usual sterile manner. Lidocaine 2% was used for infiltration anesthesia. Using modified Seldinger technique, a 7-French sheath was introduced into the right common femoral artery and a 6-French sheath was introduced into the right common femoral vein. Through the arterial sheath, angiography of the right common femoral artery was obtained. Thereafter, 6-French pigtail catheter was advanced to the level of the distal aorta where angiography of the distal aorta and the bifurcation of the right and left common iliac arteries was obtained. Thereafter, a 4-French sheath was introduced into the left common femoral artery using modified Seldinger technique. Thereafter, the pigtail catheter was advanced over an 0.035-inch J-wire into the left ventricle and LV-gram was performed in RAO view and after pullback, an aortogram was performed in the LAO view. Therefore, a 6-French JL4 and JR4 guiding catheters were used to engage the left and right coronary arteries respectively and multiple orthogonal views of the coronary arteries were obtained.,ANGIOGRAPHIC FINDINGS: ,1. LV-gram: LVEDP was 15 mmHg. LV ejection

fraction 10% to 15% with global hypokinesis. Only anterior wall is contracting. There was no mitral regurgitation. There was no gradient across the aortic valve upon pullback, and on aortography, there was no evidence of aortic dissection or aortic regurgitation.,2. The right coronary artery is a dominant vessels with a mid 50% to 70% stenosis which was not treated. The left main coronary artery calcified vessel with disease.,2. The left anterior descending artery had an 80% to 90% mid-stenosis. First diagonal branch had a more than 90% stenosis.,3. The circumflex coronary artery had a patent stent.,INTERVENTION: , After reviewing the angiographic images, we elected to proceed with intervention of the left anterior descending artery. The 4-French sheath in the left common femoral artery was upsized to a 12-French Impella sheath through which an Amplatz wire and a 6-French multipurpose catheter were advanced into the left ventricle. The Amplatz wire was exchanged for an Impella 0.018-inch stiff wire. The multipurpose catheter was removed, and the Impella was advanced into the left ventricle and a performance level of 8 was achieved with a cardiac output of 2 to 2.5 l/min. Thereafter, a 7-French JL4 guiding catheter was used to engage the left coronary artery and an Asahi soft 0.014-inch wire was advanced into the left anterior descending artery and a second 0.014-inch Asahi soft wire was advanced into the diagonal branch. The diagonal branch was predilated with a 2.5 x 30-mm Sprinter balloon at nominal atmospheres and thereafter a 2.5 x 24 Endeavor stent was successfully deployed in the mid-LAD and a 3.0 x 15-mm

Endeavor stent was deployed in the proximal LAD. The stent delivery balloon was used to post-dilate the overlapping segment. The LAD, the diagonal was rewired with an 0.014-inch Asahi soft wire and a 3.0 x 20-mm Maverick balloon was advanced into the LAD for post-dilatation and a 2.0 x 30-mm Sprinter balloon was advanced into the diagonal for kissing inflations which were performed at nominal atmospheres. At this point, it was noted that the left main had a retrograde dissection. A 3.5 x 18-mm Endeavor stent was successfully deployed in the left main coronary artery. The Asahi soft wire in the diagonal was removed and placed into the circumflex coronary artery. Kissing inflations of the LAD and the circumflex coronary artery were performed using 3.0 x 20 Maverick balloons x2 balloons, inflated at high atmospheres of 14.,RESULTS: , Lesion reduction in the LAD FROM 90% to 0% and TIMI 3 flow obtained. Lesion reduction in the diagonal from 90% to less than 60% and TIMI 3 flow obtained. Lesion reduction in the left maintained coronary artery from 50% to 0% and TIMI 3 flow obtained.,The patient tolerated the procedure well and the inflations well with no evidence of any hemodynamic instability. The Impella device was gradually decreased from performance level of 8 to performance level of 1 at which point it was removed into the aorta and it was turned off and the Impella was removed from the body and the 2 Perclose sutures were tightened. From the right common femoral artery, a 6-French IMA catheter was advanced and an 0.035-inch wire down into the left common femoral and superficial femoral artery, over which an 8 x 40

balloon was advanced and tamponade of the arteriotomy site of the left common femoral artery was performed from within the artery at 3 atmospheres for a total of 20 minutes. The right common femoral artery and vein sheaths were both sutured in place for further observation. Of note, the patient received Angiomax during the procedure and an ACT above 300 was maintained.,**IMPRESSION:**,1. Left ventricular dysfunction with ejection fraction of 10% to 15%.,2. High complex percutaneous coronary intervention of the left main coronary artery, left anterior descending artery, and diagonal with Impella circulatory support.,**COMPLICATIONS:** , None.,The patient tolerated the procedure well with no complications. The estimated blood loss was 200 ml. Estimated dye used was 200 ml of Visipaque. The patient remained hemodynamically stable with no hypotension and no hematomas in the groins.,**PLAN:** ,1. Aspirin, Plavix, statins, beta blockers, ACE inhibitors as tolerated.,2. Hydration.,3. The patient will be observed over night for any hemodynamic instability or ischemia. If she remains stable, the right common femoral artery and vein sheaths will be removed and manual pressure will be applied for hemostasis.