Minimally Invasive Hybrid Coronary Revascularization

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Cardiac Surgery and Interventional Cardiology are collaborating to provide patients minimally invasive coronary artery bypass techniques (CABG) at Saint Joseph Hospital in Lexington Kentucky. A hybrid strategy combines the treatments traditionally only available in the operating room with those only available in the cath lab.

As the baby boomers age, the risk profile of patients referred for CABG worsens. Older patients with a high incidence of diabetes, renal failure, hypertension, stroke, and COPD represent the typical patient cohort referred for CABG. Hybrid coronary revascularization (a combination of PCI/stent to the right coronary artery and/or circumflex coronary artery with minimally invasive left internal mammary artery to the left anterior descending artery) avoids a sternotomy.

The LIMA patency rate of 95 to 98 percent at 10 years provides a survival benefit to each patient. This is the premise on which Hybrid CABG is based. The rational for Hybrid CABG is based on the fact that drug eluting stents and vein bypass grafts to non-LAD territories appear to have comparable patency rates. Minimally invasive LIMA, the LAD Bypass is performed through a small sub mammary incision (5 to 7 cm). This is less traumatic for the patient and provides a faster recovery time. Indications for Hybrid CABG include proximal LAD lesion with favorable lesion for PCI in the right coronary artery and circumflex coronary arteries. Contraindications include body mass index greater than 35, intra muscular LAD and a left subclavian occlusion, or prior thoracic surgery.

Other Hybrid surgeries being performed at Saint Joseph Hospital included Percutaneous Valve (TAVR), Mitral Clip procedure, and Hybrid Aortic Arch Debranching procedure for Thoracic Aneurysms. The results for Hybrid revascularization are safe with a low mortality rate; low morbidity rate; shorter ICU stay; and shorter hospital stay with a faster recovery. We believe this team approach with the Interventional Cardiologist and Heart Surgeon working closely together provides better patient care and outcomes. ◆