



THE HEART CENTER

FOUNTAIN VALLEY REGIONAL HOSPITAL AND MEDICAL CENTER

Relief from Chest Pain

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Post-surgical nuclear studies have clearly shown the growth of new blood vessels after TMR procedure

Until recently, very little could be done for patients suffering from severe chest pain unable to undergo coronary bypass surgery or angioplasty. Now we have a procedure offering effective pain relief for these patients.

Transmyocardial laser revascularization (TMR) utilizes a carbon dioxide laser to drill small holes from the outside of the heart into the ventricle, or pumping chamber. How does this work? Chest pain occurs when part of the heart becomes starved for oxygen. TMR appears to stimulate the heart muscle to grow new blood vessels in and around the lasered areas. These new vessels increase the supply of oxygen-rich blood to the affected areas, thus eliminating the pain.

Post-surgical nuclear studies have clearly shown the growth of new blood vessels after TMR. Long-term studies indicate that patients who undergo TMR typically experience prolonged relief from chest pain and make fewer emergency room visits.

As a surgeon, it is very exciting to be able to offer pain relief for patients for whom previously nothing could be done:

- Patients medically unable to undergo cardiac bypass surgery.

- Patients who have undergone bypass surgery but still experience chest pain as a result of small bypass graphs.
- Patients who have undergone repeat bypass procedures.
- Diabetic patients experiencing chest pain as a result of having small blood vessels.

Knowledge is empowerment. If you are suffering from chest pain, you need to know about all of your choices. Ask your provider if TMR is right for you. For free information on TMR or for a physician referral, call (800) 398-5734.

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Reginald Abraham, M.D.

Surgical Techniques May Reduce Brain (Neurocognitive) Dysfunction After Cardiac Procedures

Cardiac surgery has saved countless lives, but it does have risks. One of them is neurocognitive dysfunction. This type of impairment affects the part of the brain that relates to behavior and thinking ability. The incidence of neurocognitive dysfunction may be as high as 60 percent following certain cardiac procedures, particularly those involving the heart-lung machine. Often it is a spouse who notices psychological or emotional changes and reports that the loved one is “not quite the same.”

Neurocognitive dysfunction may result from small strokes that occur during and immediately after surgery. These strokes may be caused by blockages, such as blood clots, air bubbles, plaque or debris that travel to the brain. Neurocognitive dysfunction may also occur as a result of the body's inflammatory response to the cardiac procedure.



At Fountain Valley Regional Hospital and Medical Center, our cardiac surgeons use a variety of techniques designed to minimize the risk of stroke, including:

- Transesophageal echocardiograms to provide surgeons with a clear view of possible blood clots, air bubbles, plaque or debris so they may be avoided or prevented from breaking loose and traveling to the brain.
- A cannula, a small tube, with a built-in filter to catch and trap debris during the procedure.
- Medication and blood conservation techniques to minimize the body's inflammatory response and reduce transfusions.
- Atrial fibrillation ablation and medication to regulate irregular heart rhythms and decrease the chances of blood clot formation.
- Recirculation or filtration of blood during the procedure.