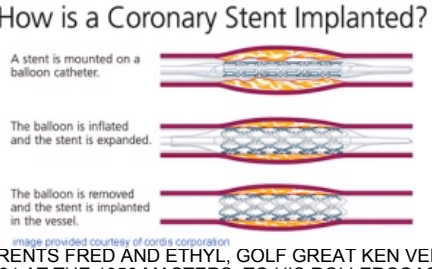
Improving the Odds:Stenting – Head To Toe



WITH AN UNWAVERING SPIRIT INFUSED IN HIM BY PARENTS FRED AND ETHYL, GOLF GREAT KEN VENTURI HAS WEATHERED LIFE'S ADVERSITIES LIKE A PRO. FROM HIS BURST ONTO THE GOLF SCENE AT 24 AT THE 1956 MASTERS, TO HIS ROLLERCOASTER CAREER AND HEALTH CHALLENGES, KEN'S HONEST AND EMOTIONAL APPROACH TO LIFE HAS HIM COMING OUT ON TOP EVERY TIME.

Depending on heredity, lifestyle or age, arteries (the muscular blood vessels that circulate blood from the heart to the rest of the body) may become narrow, stiff or blocked due to a buildup of plaque made up of cholesterol, calcium and fibrous tissue. A blocked artery can occur anywhere in the body and if severe enough, can result in heart attack, stroke, or even death. Incidence of cardiovascular disease (including coronary artery disease, heart failure, stroke and hypertension) is present in nearly 40 percent of the population over age 40 and affects more than 70 percent of men and women over age 60.

While the location and severity of blockage will ultimately determine the best course of treatment for each individual, some patients may be candidates for stent placement. A stent (a small metal mesh tube) can be placed not only in a coronary artery but can also be used in peripheral arteries in the extremities and in a carotid artery in the neck and even in the brain, among other locations. Either bare metal stents or drug-eluting stents, which are coated with a drug to help keep the artery open over time, can be used. Because stents are used in a variety of locations in the body, the type of stent used is dependent upon the particular procedure.

Stent placement offers the benefits of smaller incisions for a minimally-invasive approach, shorter recovery times and hospital stays, and a quicker return to regular activities. CORONARY STENTS

Like Ken Venturi many people are unaware of having heart disease. Coronary artery disease develops slowly, reducing blood flow through the arteries.While the severity of Ken Venturi's condition required open heart surgery, a less invasive option is available for some patients—the placement of a stent to improve blood flow.

When blocked coronary arteries are diagnosed (often by a stress test), an angiogram may be performed. Via a small incision in the femoral artery in the groin or brachial arteries in the arm, a thin tube, or catheter, is guided to the main coronary arteries. A contrast dye is injected into the arteries, offering the cardiologist a clear view of the blood vessels on a monitor.

Depending on the location of the blockage and the size of the artery, a small, expandable balloon can be inserted via the catheter and inflated in the narrowed part of the artery to displace the plaque along the artery walls, improving blood flow. While this procedure, called an angioplasty, does not necessarily include the use of a stent, 90 percent of coronary angioplasties include a stent placement. The stent, positioned on the balloon catheter, expands within the narrowed area when the balloon is inflated. The plaque is forced against the wall of the artery, allowing blood to flow freely.

Eisenhower Medical Center's 13 interventional cardiologists perform approximately 800 coronary stent placements each year. "We started the stenting procedure about 12 years ago," explains Barry Hackshaw, MD, Board Certified Cardiologist and Director of Eisenhower's Cardiac Catheterization Lab. "We found that about a third of the angioplasty procedures without stents would fail within six months. Like any wound, it wants to heal and close." The re-narrowing (or restenosis) of the vessel after surgery was largely due to the formation of scar tissue. "We began placing the stents to keep the blood vessel open," says Dr. Hackshaw. "The stent reduces the rate of restenosis."

Because coronary artery disease develops over time, Dr. Hackshaw recommends the preventive measure of smart heart care, including a proper diet, regular exercise and not smoking. "Everyone should know their cholesterol numbers,"Dr. Hackshaw notes. "Total cholesterol should be under 200. The good cholesterol, or HDL, should be above 40. The LDL, or bad cholesterol, should be under 130. That's a good baseline for anyone not already receiving treatment for heart disease."

For those who are at risk for heart disease or who have already experienced symptoms (including pressure, tightness or pain in the chest, arm, back or jaw, vomiting, nausea, dizziness or shortness of breath), the earlier intervention occurs, the better. "We like to see people in their 40s and 50s," says Dr. Hackshaw. "It offers a chance to prevent something catastrophic from happening and that is definitely a good thing." PERIPHERAL STENTING

Thirty to 40 percent of patients who suffer from heart disease will also suffer from peripheral arterial disease (PAD), which commonly affects arteries in the legs. Risk factors for PAD, which affects nearly 12 million people in the United States, include coronary artery disease, diabetes, smoking, obesity, lack of exercise, age and high blood pressure. At higher risk of heart disease and stroke, people with PAD can be diagnosed with a simple, non-invasive test that measures the ratio of the blood pressure in the ankle to that in the arm.

"People with PAD have a variety of symptoms or sometimes none at all," says Eisenhower's Puneet Khanna, MD, Board Certified Interventional Cardiologist. "Some have fatigue when they walk and complain of their legs giving out. Others describe a pain like arthritis."While some cases of PAD can be treated with lifestyle changes and medications, more advanced cases can benefit from stent placement, which is performed with a catheter procedure similar to coronary stent placement, or other procedures using adjunctive devices.

"There are major arteries in the pelvis that can have blockage, as well as in the thighs and below the knee," explains Dr. Khanna. "We have even had people who have had arteries blocked in their feet." Because PAD deprives the extremities of adequate blood flow and oxygen supply, healing of sores is slowed and amputation can be a real threat.

Dr. Khanna, as well as Eisenhower's Board Certified Cardiologists Barry Hackshaw, MD, Ghasson Kazmouz, MD and Khoi Lê, MD, Board Certified Vascular Surgeons Alan Williamson, MD, Anibal Gauto, MD and John Miller, MD and Fellowship trained Vascular Surgeon Son Ha Yu, MD, who also perform peripheral stent procedures, has successfully eliminated the need for amputations in many cases by performing stent placements. "Eighty-five to 95 percent of the time we can save an extremity with just a three millimeter incision using a stent or other adjunctive devices," explains Dr. Khanna. "It is very gratifying." CAROTID STENTING

Stroke is the third leading cause of death in the United States and is caused primarily by carotid artery disease. Running along each side of the neck, the carotid arteries begin in the aorta and extend into the head and neck, charged with the critical task of supplying blood to the brain. Patients with blockage in a carotid artery may experience mini-strokes known as transient ischemic attacks or TIAs, but more than 50 percent of stroke victims show no warning signs.

The plaque that blocks the carotid artery can also cause a dangerous condition called an arterial embolism, in which plaque breaks away from its original location in the artery. The piece of plaque (or emboli) can lodge elsewhere in an artery, blocking blood flow to the brain and causing a stroke.

Heart disease, diabetes, smoking, obesity, lack of exercise, age and high blood pressure all contribute to carotid artery disease, which can be detected with ultrasound imaging.

To help unblock carotid arteries, Brian Herman, MD, Board Certified Interventional Neuroradiologist, has been performing carotid stenting for more than 10 years at Eisenhower Medical Center. Certified by the Centers for Medicare & Medicaid Services (CMS), Eisenhower Medical Center is the only hospital in the Coachella Valley performing this procedure.

Speeding RecoveryCardiac Rehabilitation Aids Healing Process Cardiac rehabilitation not only addresses the needs of stent patients but also those who have had heart attacks, chest pain, bypass surgery or heart transplants. "Cardiac rehabilitation is about addressing risk factors, motivation and lifestyle habits," says Carl Enzor, RN, Director of Eisenhower's Renker Wellness Center.

The program has three primary components: exercise, education and psychological support. The exercise component is based on a systematic process, taking patients from very low intensity and increasing the cardiovascular activity based on each patient's endurance. "Our mantra is start slow and low," say Enzor. All patients are attached to a cardiac monitor throughout their workouts and are supervised at all times. "The monitor helps us see how the heart responds to the stress of exercise during the different phases of a workout. It also enables us to know when we can increase the intensity," says Enzor.

Depending on their medical condition and fitness level, some patients have 12 sessions of cardiac rehabilitation; others do as many as 36 sessions. "We build the program to suit the patient," notes Enzor. "We want them to gain the skills in order to be confident on their own."

According to Enzor, many patients meet and exceed that challenge. Renker Wellness Center has had patients complete marathons as well as the Tram Road Challenge in Palm Springs, a particularly grueling uphill 3.7 mile race. "One patient in his late 60s was convinced he could not complete the race. We encouraged him and when he completed the race, he felt like he had his whole life back."

Enzor says the program helps patients with a proper diet. Cardiac rehabilitation also has a stress management component (patients can even enroll in yoga classes) to help patients reduce stress and anxiety.

While a surgical repair of the artery (a carotid endarterectomy) is an option, the surgery can be too risky for some patients, making carotid stent placement a safer and effective alternative. “Carotid stenting allows me to treat narrowed arteries that are hard to reach or that might be difficult to treat with surgery,” explains Dr. Herman. “The procedure offers the benefits of a smaller incision and a shorter recovery time and hospital stay.”

Although stent placement is not the appropriate choice for all patients with blockage in their arteries and does not eliminate the need to modify one’s lifestyle to improve diet and exercise, stenting offers a minimally-invasive approach that can dramatically improve one’s quality of life.

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