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Soothing Angina

Matthew Herper and Robert Langreth 07.13.09

One million Americans suffer heart attacks every year. Quickly getting their arteries propped open with stents saves lives, studies have found. But millions more develop heart symptoms gradually. Usually it comes in the form of angina, a squeezing pain in the chest or arms caused by clogged arteries that starve the heart muscle of oxygen. The pain comes with exercise or stress, and then goes away.

People often assume they need a stent to get that artery opened up right away--or else. But new results from two big trials are unambiguous: The high-tech procedures don't save lives or prevent heart attacks for most patients with stable symptoms. "It doesn't do anything to lower risk of subsequent death or heart attack," says William Boden, a cardiologist at the State University of New York at Buffalo who led one of the trials. Drug treatment alone is just as effective.

The reason for this counterintuitive result is that most heart attacks don't occur at the locations that appear most clogged on an angiogram. Instead, heart attacks happen when lesser narrowings become inflamed and suddenly rupture, spewing a clot into the bloodstream. The blockage that bursts isn't necessarily the one that causes symptoms. People think heart disease "is just a plumbing issue, that clogged pipes mean an impending heart attack," says James Stein of the University of Wisconsin at Madison. "A stent is just a local therapy for a systemic problem."

Stents are installed during angioplasty, in which a balloon is used to unclog an artery. They are necessary if drugs cannot produce enough pain relief, say cardiologists. One of the two trials found that 66 out of 100 patients who received a stent were angina free after a year versus 58 out of 100 who received only drugs; that difference faded after five years.

Another study published in June comparing stents to drugs in diabetic heart patients found no difference in the risk of death or heart attacks, and only a little over 40% of those assigned drugs later got a stent. A more clogged-up group received either drugs or cardiac bypass surgery, in which veins are used to bypass blocked arteries. The bypass patients didn't live longer but did have fewer nonfatal heart attacks. "I think physicians will be more likely to consider bypass for their diabetic patients and steer away from angioplasty," says study author Sheryl Kelsey of the University of Pittsburgh.

One diabetic patient who did well without a stent is Earl Anderson of Old Bridge, N.J. The 62-year-old retired FBI agent first felt chest pains while rushing to catch a plane in 2002. An angiogram revealed a narrowing in one artery, and doctors gave him drugs. His angina soon went away and hasn't come back. Now his cholesterol and blood sugar are down; he plays tennis weekly with his 14-year-old son.

Cardiologists who install stents say that these relieve pain better than drugs and that most patients have more symptoms than Anderson. "Patients with a lot of symptoms don't do well with drug therapy," says Gregg Stone of New York-Presbyterian Hospital.

One reason so many stents are implanted is money. "Hospitals are paid handsomely if the patient has bypass surgery or has a stent. But they are not paid [so much] if a patient has drugs," says cardiologist David Hillis of the UT Health Science Center in San Antonio. While generally safe, stent procedures can cause heart attacks, bleeding or even death.

Another misconception is that getting a procedure will obviate the need for drugs. "People have this impression that 'If I get a stent, then I am not going to have to take medicine,' and that is wrong," says Mayo Clinic cardiologist Raymond Gibbons. "Everybody is going to get medicines. The real question: Is stenting or surgery going to bring enough benefit in addition?" Patients who get drug-coated stents often must take more drugs; they need to stay on the blood thinner Plavix for at least a year to prevent rare cases of clots forming in the stent.

One key test that is often skipped: stress tests to determine if your heart is getting enough oxygen during exercise. The problem,

says Scripps Research Institute cardiologist Eric Topol: Without stress tests, doctors don't know whether narrowings seen on an angiogram are causing problems.

Heart patients with stable symptoms have choices--and time to consider their decisions. For many of them drug therapy alone, drug therapy and stents, or drug therapy with angioplasty are all reasonable options. If you are not sure which you want, you can ask the doctor doing your angiogram to hold off on the stent if nothing alarming is found. This will give you time to discuss the result with your primary care doctor or referring cardiologist.

Angina

A lack of blood flow to the heart causes chest discomfort but doesn't kill the muscle. Most angina comes on only during exertion and stops afterward. Unstable angina that happens at rest is treated as a medical emergency.

Prevention

Eat a healthy diet and exercise to prevent the buildup of artery plaque.

Take statins and blood pressure drugs if your doctor dictates.

Treatment

For most patients, drug therapy can reduce the risk of heart attack and treat chest pain.

A stent/angioplasty procedure can reduce chest pain but has no proved impact on survival in those with stable symptoms.

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