Lifelong Health: Coronary artery disease - bypass or angioplasty?

by Dr_David_Lipschitz

Recently, a study published in The New England Journal of Medicine compared coronary artery bypass graft surgery with angioplasty in patients with severe coronary artery disease. This included patients who had blockage of the left main coronary artery, or the "widow-maker," as well as patients with blockage of multiple coronary arteries, also known as multivessel disease.

A quick read of the bottom line and the conclusion would lead one to believe that bypass is the treatment of choice for patients with significant coronary artery disease. But not so fast! A little more investigation reveals a slightly more complicated story. In fact, in the very same issue were accompanying editorials and experts' comments that brought up serious questions.

In examining the effectiveness of bypass versus angioplasty, this new study compared four main statistics: the subsequent number of deaths, strokes, heart attacks and whether arteries became blocked again and required more intervention.

The risks of heart attack and death were the same with both procedures, and there was a modest increase in the risk of stroke in the bypass group; but differences noted were of little clinical significance. The only major finding was a higher risk of recurrent blockage, also known as restenosis, in the angioplasty group. In the context of these four concerns, researchers claim that bypass is the preferred choice.

Here is the key question: Should bypass be the treatment of choice for coronary artery disease merely because angioplasty presents a higher risk of restenosis? In other words, is the more invasive procedure better simply because the less invasive option might need to be repeated? For me, the answer is not clear-cut.

First, this report did not consider quality of life following surgery or that memory loss occurs in as many as 50 percent of patients undergoing bypass. Second, these patients were followed for only one year. There was no information presented about how the two procedures affect long-term prognoses.

And what about the age of the patient, the presence of other serious disease, and declines in the ability of the heart to pump adequately? All of these factors complicate the determination of what the ideal course of treatment is.

In addition to the varying results, the wide mix of patients' symptoms complicated the study's findings. A fraction of the patients with severe coronary artery disease were totally asymptomatic, while the remainder had chest pain. Of those with pain present, some had "stable angina," a condition in which pain is present but not increasing in frequency or severity. Here, current consensus indicates that the treatment choice should be

between an angioplasty and aggressive management with medications. Most results indicate that medical management one year after initiation of treatment is equally as effective as angioplasty. For these patients, a case could be made that bypass should not be the first choice.

A subgroup of participants was diagnosed with a condition called "unstable angina," in which chest pain occurs more frequently or more severely. These symptoms are harbingers of an impending heart attack, and a rapid intervention by bypass or an angioplasty can save a life. For this group, aggressive care is essential.

Finally, some patients were evaluated because of atypical chest pain, which is almost always mild. Testing was needed to determine whether the pain was caused by the heart or something else. In these cases, too, bypass is open to debate.

Deciding how to treat coronary artery disease remains a difficult decision for patients and their families. Current information is confusing, and there is little consensus, even among experts. Based on these facts, here is the best advice: Make sure that you choose a cardiologist whom you totally trust and who has an impeccable reputation. Seek advice from your primary care physician. Do your research and ask around.

Luckily, President Barack Obama's health care plans provide some hope for the future. In the coming years, researchers will receive substantial funding to undertake the extensive comparative studies necessary to determine which approach is truly best. Given the seriousness of our health problems, the rising health costs and the aging of the baby boomers, this research is vital. It will ensure patients get the highest quality of care, leading all of us to find rational solutions to a difficult problem.

Dr. David Lipschitz is the author of the book "Breaking the Rules of Aging."

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