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Heart to Heart

With Philip S. Chua, M. D.

Bypass Better Than Plasty

Patients with two or more blocked arteries to the heart live longer if they have coronary bypass surgery instead of angioplasty (dilating open the narrowed arteries) and stenting (inserting a wire-mesh coil to prop open the dilated arteries to minimize re-closure), reports a major clinical study.

The research, which was done on 60,000 patients managed from 1997 to 2000, provides clinicians the first long-term comparison of death rates for the two procedures. Edward Hannan and his colleagues at the State University of New York in Albany stated that "patients were 33% to 56% more likely to die after angioplasty and stenting than after bypass surgery."

As a cardiac surgeon, I would like to qualify and explain this statement in layman's term because the way the medical result above was presented, people may get the wrong idea that a person who undergoes angioplasty and stenting has a 33%-56% risk of dying from the procedure. No, that is not what the researchers meant. What the findings showed was, in the long run, say in 3 years or more following the procedure, 33% to 56% more deaths have been noted among those who had angioplasty and stenting than among those who had coronary bypass surgery. The actual risk of angioplasty and stenting is one percent or less, and coronary bypass, bring a surgical procedure, between 1% to 3%. What the research findings suggest is that bypass surgery procedure is longer lasting in protecting the patient's heart and in prolonging life, compared to angioplasty/stenting (a much less invasive procedure.)

Hannan said "the analysis suggests that in just three years, there were up to 540 'excess deaths' that might have been avoided if angioplasty and stent patients had had bypass surgery instead."

The results of this clinical study were published in the New England Journal of Medicine May 2005 and "reflect real-life experience and not tightly controlled clinical trials…only four prior studies compared the relative outcomes for the two procedures, and they yielded mixed results."

The Journal reported that "Hannan's team analyzed the data from 37,212 heart bypass patients and 22,102 angioplasty/stent patients in the New York heart registries. Within the years of the procedure, patients who had angioplasty along with insertion of a stent consistently had higher death rates than those who had

bypass surgery. In the sickest group of patients, the death rate was 15.6% for those who had angioplasty versus 10.7% for those who had bypass surgery."

This clinical study "could have a profound implications for heart patients because twice as many now have angioplasty to avoid the trauma of surgery, and the new findings will have a dramatic reversal from just a decade ago," according to many physicians.

"What is new is the impressive advantage of heart bypass surgery over angioplasty," goes the editorial in the journal, authored by Bernard Gersh and Robert Frye of the Mayo Clinic in Rochester, Minnesota. They further stated that "bypass surgery may be superior in a larger group of patients than initially considered," which means, if the analysis had included all the patients who had angioplasty and those who has bypass surgery since the mid 1960s – the past 45 years – the overall advantage and superiority of bypass surgery over angioplasty/stenting would have been even more overwhelmingly dramatic.

In the year 2002 alone, cardiologists in the United States performed 1.2 million angioplasties, about half with stent, and cardiac surgeons did about 515,000 coronary bypass surgeries, according to the latest American Heart Association statistics. With these significant new research findings, those statistics will surely change the biases and mindset among patients and the medical community alike. This is a natural part of therapeutic evolution and medical progress. And all of us - and the world as a whole - are the better for it.

Quotation:

"…the new study shows, for longevity, heart bypass surgery is superior to angioplasty."