Helping heart attack survivors escape later cardiac death

People who are lucky enough to survive a first heart attack (death of heart muscle) aren't free of further, life-threatening subsequent cardiac-related death, especially during the first year after their attacks. Yet medical science coupled with clinical experience is increasing their chances of survival, scientists and clinicians concurred last week at a symposium on survivors of heart attacks at the American Heart Association's 55th scientific sessions in Dallas.

A number of clinical trials have been conducted to see which treatments might help heart attack survivors escape subsequent cardiac-related death, reported Curt D. Furberg of the National Heart, Lung and Blood Institute in Bethesda, Md. Ten trials, he said, have attempted to determine whether beta-blocking drugs (drugs that influence the patient's heart's beta-adrenergceptors in the heart) can increase heart attack patients' chances of subsequent survival. Nine out of 10 of the trials found that the drugs could. And of seven trials testing the effects of exercise on heart attack patients' subsequent survival, six showed a favorable trend. “These results are intriguing,” he said, "but I do not think they are fully conclusive." Although lipid-lowering drugs, anticoagulants and platelet inhibitors have had no demonstrable effect on patients' subsequent survival, they may still prove of benefit to select patients, he pointed out.

Some 60 percent of patients who survive heart attacks do so without complications — that is, four to five days after an attack have no more ischemia (reduced blood flow to the heart), no failure of the left ventricle of the heart and no heart arrhythmias. How the results of the above trials might benefit this particular subset of patients is discussed by Roman W. DeSanctis of Harvard Medical School in Boston, both on the basis of the latest clinical trials and his own clinical experience. Such patients should receive beta-blocking drugs, he said, plus the antiangina drug nitroglycerin and possibly platelet inhibitors. In addition, they should give up smoking because studies have shown that giving it up after a heart attack reduces the risk of death; exercise is a good form of exercise for patients who don’t. This high-risk group may benefit not just from the above treatments and behavior modifications but also from other treatments as well. For instance, if such patients are diagnosed for the first time in two or more arteries supplying their hearts with blood, they may profit from coronary bypass surgery, pointed out Melvin D. Chetlin of the University of California at San Francisco. While some patients who have had heart attacks benefit from antiarrhythmia drugs, others seem to profit more from antiischemia drugs, reported J. Thomas Bigger of Columbia University College of Physicians and Surgeons in New York City. A study is now in progress to determine which type of drug is more advantageous for such patients, he said.

Regardless of the treatment that heart attack survivors receive, what they are most endangered by in subsequent months, it appears, is another heart attack but a particularly deadly arrhythmia of the heart from ventricular fibrillation, which can result in sudden death. For instance, 50 to 60 percent of heart attack patients who die from a heart-related death in the year after their heart attacks do so because of ventricular fibrillation, Bigger and his colleagues have found. The ventricular fibrillation in turn, they suspect, is probably due to deprivation of blood flow to the heart. In fact, Leonard A. Cobb of the University of Washington School of Medicine in Seattle and colleagues have found that this is the case. They studied 450 patients who had had heart attacks and who subsequently went on to have near-fatal ventricular fibrillation. They found that two-thirds of the patients had experienced ventricular fibrillation because of deprivation of blood flow to the heart; the other one-third had fibrillation as a result of a new heart attack.

The patient who survives near-death due to ventricular fibrillation is at high risk for it again. While beta-blocking drugs do not appear to mitigate this risk, bypass surgery appears to do so, Cobb and his team have found. Antiarrhythmia drugs can help reduce the risk too, reported Richard O. Russell of the University of Alabama at Birmingham. —J.A. Treichel