

Aggressive Treatment Can Extend Life of Patients with Heart Attack Shock

DESPITE ADVANCES in treatment, people who suffer a heart attack, survive the first hit, and get to a hospital still remain in danger. Almost one in 10 will develop cardiogenic shock, in which the heart malfunctions, causing an inadequate amount of blood to be pumped to the vital organs. As blood pressure plummets, the skin becomes cool and the body's organs shut down. Cardiogenic shock is the leading cause of death for heart attack patients once they reach the hospital.

A study published in 1999 by a group of researchers led by Judith S. Hochman, M.D., Clinical Chief of the Leon H. Charney Division of Cardiology and Director of Cardiovascular Clinical Research at NYU School of Medicine, showed that aggressive care with invasive treatments, such as angioplasty or open-heart surgery, could extend life for at least one year. On the basis of that study, the American Heart Association and the American College of Cardiology recommended that heart attack shock patients be treated aggressively. Still, not all eligible patients



TERTIARY CARE HOSPITALS LIKE NYU MEDICAL CENTER HAVE THE SOPHISTICATED INVASIVE CARE FACILITIES AND EXPERTISE FOR THE AGGRESSIVE TREATMENT OF CARDIOGENIC SHOCK PATIENTS. THE IMAGES OF THE CORONARY ARTERIES (ABOVE) ARE FROM CATHETERIZATION, AN ADVANCED INVASIVE PROCEDURE.

receive aggressive therapy at tertiary-care hospitals, which have sophisticated invasive-care facilities required for this kind of therapy. Moreover, most patients who reach a hospital without such facilities are not transferred to one where they can be treated appropriately.

Now, a new study by Dr. Hochman's group demonstrates that the long-term survival benefit is even greater than originally believed for some hospital-

ized cardiogenic shock patients who quickly receive invasive treatment. The study, published in a recent issue of the *Journal of the American Medical Association*, shows that with invasive treatment, 33 percent of hospitalized heart attack patients with cardiogenic shock were alive six years afterwards. By comparison, only

20 percent of those treated initially with medications and a device to support the circulation, called an intra-aortic balloon pump (IABP), survived long-term.

"Our study shows a significant survival benefit that is sustained up to 11 years," says Dr. Hochman, who is also the Harold Snyder Family Professor of Cardiology.

"This benefit extends even to selected patients over the age of 75. Patients can do very well and clearly benefit from this therapy, but many doctors are reluctant to treat these shock patients aggressively because they are the sickest of the sick. The death rate is so high."

Another problem is that some doctors are also reluctant to put shock patients into an ambulance and transfer them to tertiary-care centers, where they can receive appropriate

care. Tertiary-care hospitals provide such specialized services as heart catheterization and angioplasty, which involves threading a catheter-tipped balloon to the site of a blockage in a coronary artery.

Only about 60 percent of shock patients younger than 75 received aggressive forms of treatment in tertiary-care centers in 2004, according to a previous study by Dr. Hochman and her colleagues. And only 38 percent of shock patients were transferred to such centers from 1998 to 2001.

The latest report from Dr. Hochman's group stems from an international trial funded by the National Heart, Lung, and Blood Institute. It enrolled 302 patients between 1993 and 1998 at 29 tertiary care centers. All were initially treated with medications and IABP to support the circulation and half received immediate angioplasty or bypass surgery.

In light of the new study, Dr. Hochman hopes that more patients with cardiogenic shock will be treated aggressively, and she already sees some progress. The New York State Department of Health recently began a two-year experiment in which heart attack patients with severe cardiogenic shock will be separated from the public databases. This means that such patients' mortality rates will not reflect on their physicians' records, encouraging more of their doctors to perform angioplasty and surgery. •

— Marjorie Shaffer