

Stenting not necessary in late treatment of heart attacks

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Two years ago, a major study found that many patients who receive delayed treatment for a heart attack do just as well with drugs alone as they do with drugs plus stents to prop open their blocked arteries. Now, further analysis shows that the drug option is cheaper and that there is no meaningful long-term difference in quality of life between the two options.

"The finding is just one more reason to question the use of routine stenting in late-treatment patients when cheaper, less invasive options are just as effective," says Daniel Mark, M.D., a member of the Outcomes Research Group at the Duke Clinical Research Institute and the lead author of the study appearing in the Feb. 19 issue of the *New England Journal of Medicine*.

The new study reports on the quality of life and medical expenses of patients enrolled in the Occluded Artery Trial (OAT), a study that compared optimal drug treatment with drugs plus stenting among patients who had suffered a heart attack but who received treatment days or even weeks after the first symptoms appeared.

Each year, about one million people in the U.S. suffer heart attacks. Studies show that the sooner treatment begins, the better - ideally, within a couple of hours. But in real life, about one-third of all patients are treated more than 12 hours after the first symptoms appear. During catheterization, many are found to have a 100 percent blockage in one of their arteries. At that point, there is no benefit in using clot-busting

drugs, but doctors have long believed that placing a stent in such patients might still be helpful.

In the initial OAT trial, Judith Hochman, M.D., from New York University, and Mark, presented findings from a study of 2,166 patients showing that optimal medical therapy and medical therapy plus percutaneous coronary intervention, or PCI (using balloons and stents to open totally clogged arteries), were equally effective in stable heart attack patients whose treatment is delayed for days or even weeks. Now, in examining quality of life issues in the two groups, investigators say that while PCI does indeed produce modest benefits in reducing chest pain and improving functioning, those benefits do not last.

Mark and an international team of investigators examined how patients felt about their lives and the cost of the two approaches among 951 patients in the original study. Participants included patients who had suffered a heart attack anywhere from 3 to 28 days prior to enrollment who had a completely blocked artery but who were clinically stable and experiencing no chest pain. All of the enrollees received optimal medical therapy, but half were randomized to receive PCI as well.

Quality of life measures included the Duke Activity Status Index (DASI), which reflects cardiac function; the Medical Outcomes Study 36-Item Short-Form, which assesses a number of items, including pain, physical limitations, social function and vitality; and the Mental Health Inventory, which assesses psychological well-being. The questionnaires were administered face-to-face or by telephone upon enrollment in the study, and at 4, 12, and 24 months thereafter.

Investigators found that at four months, patients in the PCI group reported less chest pain and scored higher on the DSAI. But those differences were small and disappeared over time. By the end of the study, patients in the medical therapy group appeared to be doing just as

well as those in the PCI group.

The researchers also compared the costs of the two treatments and the use of health care resources among a subgroup of patients in the United States. They found that during the first month of treatment, members of the PCI group stayed in the hospital 1.2 days longer than those in the medical group, mostly reflecting longer time in intensive care. They also found that the mean cost for hospital and physician care during the first 30 days after starting treatment was \$22,859 for the PCI group and \$12,683 for the medical therapy group. Overall, cumulative two-year costs were approximately \$7,000 higher in the PCI group.

"What we have here is one of those cases where less is more," says Mark. "While it may seem that going an extra step in opening up clogged arteries even days after a heart attack, we know that clinically, it doesn't seem to offer the advantages we expected. Coupling that with the higher cost, we now know that adding PCI to standard medical care in opening blocked arteries more than a day after a heart attack is not good value. In an era when the high cost of health care is the subject of intense debate, this study offers us one way we can offer high quality care for less money."

"All heart attack patients should seek treatment right away to limit damage to the heart muscle," noted Elizabeth G. Nabel, M.D., director of the National Heart, Lung, and Blood Institute, which supported the study. "For the one-third of patients who do not receive immediate care - but who are otherwise stable - we have greater evidence of how treatments really affect them. Medical care is not just about immediate results and survival, but it is also about providing good quality of life and minimizing medical costs."

Source: Duke University Medical Center

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