Statins helpful, but no quick fix after cardiac emergency

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Over the long term, treatment with cholesterol-lowering statins reduces the rate of mortality and cardiovascular events such as heart attack, for people with and without heart disease. Still, it is unclear whether these drugs take effect rapidly when the risk of these dire events is highest.

A systematic review of randomized controlled trials found that death, stroke and heart attack did not decline significantly in the first few months after starting the drugs, but indicated that statins might reduce the likelihood of severe chest pain during this period and are quite safe in any case.

“Our findings suggest that there probably is a benefit with statin treatment early on, although it is small, and we know that it accumulates with time. And patients can be assured that serious side effects are very rare,” said Matthias Briel, M.D, an assistant professor at McMaster University, in Ontario, Canada, and senior review author.

The review appears in the latest issue of *The Cochrane Library*, a publication of the Cochrane Collaboration, an international organization that evaluates medical research. Systematic reviews draw evidence-based conclusions about medical practice after considering both the content and quality of existing medical trials on a topic.

Studies in the review included individuals who had undergone hospitalization with acute coronary syndrome—heart attack or the severe, uncontrolled chest pain of unstable angina. These patients are in

imminent danger of another, potentially fatal, heart attack.

There is reason to hope that statins might help in these precarious situations. In addition to their cholesterol-lowering effects, the drugs appear to reduce vascular inflammation and clot formation, and some observational studies found that patients started on statins while still in the hospital were less likely to die within the next few months.

Yet, most randomized controlled trials of statin treatment after heart attack or unstable angina have initiated treatment three or more months after the episode, leaving the question of immediate benefit unsettled.

For the review, the authors pooled data from 18 randomized controlled trials on 14,303 patients, ages 53 to 69 and mostly male, who had been hospitalized for acute coronary syndrome. Researchers assigned patients, who had not been taking statins previously, to groups who began treatment with one of these drugs within 14 days of admission to the hospital, or underwent treatment with placebo or usual care.

The reviewers found no statistically significant difference in the combined rates of death, heart attack or stroke one month or four months later, between patients given statins and those who received placebo or standard care. However, patients on statins appeared slightly less likely to die or have heart attacks or strokes during this time.

There also were no significant differences in the incidence of new or worsening heart failure or of having revascularization procedures like bypass surgery, between the groups.

Patients who received statins were, however, significantly less likely to suffer episodes of unstable angina four months after treatment began.

Adverse effects were “very rare” in both statin and control groups, Briel

said. Signs of muscle damage—the most severe risk of statin therapy—were limited to patients in a single study who received a particular statin, simvastatin, at a dosage known to carry a relatively high risk of this side effect. “These drugs may be considered quite safe,” even for these extremely ill patients, he said.

“This analysis focuses on such a short period of time, it probably shouldn’t surprise anyone that it was difficult to see much of a difference,” said Steven Nissen, M.D., chairman of cardiovascular medicine at Cleveland Clinic. “We give cholesterol-lowering drugs not to change short-term outcome, but long-term outcome: the purpose is to lower cardiovascular events over time.”

What’s more, Nissen said, the Cochrane meta-analysis mixed older studies using very small doses of weak statins with more recent studies in which clinicians prescribed large doses of potent drugs. “Virtually all the evidence for benefit comes from studies using high doses of drugs like atorvastatin (Lipitor)…which is the gold standard of how we treat these patients now,” he said.

Pooling data from such different regimens “is like mixing apples and oranges,” Nissen said. “A more interesting analysis might analyze high-dose and low dose-statins separately.” Most important, he said, is to not interpret the study to justify withholding statins from patients with acute coronary syndrome. “Waiting weeks to months after a heart attack to start cholesterol-lowering treatment is not wise,” he said. “We’ve learned getting people started right away is important in getting good compliance… that’s when we have the patient’s attention.”

Briel likewise concluded that the lack of a substantial immediate effect should not alter what has become the standard recommendation to begin statin treatment quickly. Whether or not the early benefit is small, “if you start earlier, you get the long-term benefit earlier,” he said.

The review discloses that four of its coauthors received honoraria, grant support or consulting fees from pharmaceutical companies; however, none was related to drugs or research included in the review.

More information: Vale N, et al. Statins for acute coronary syndrome. *Cochrane Database of Systematic Reviews* 2011, Issue 6.

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