Medical Xpress

Intervention results in increased use of evidence-based medications for patients with acute coronary syndrome

March 25 2012

Among patients with acute coronary syndromes (such as heart attack or unstable angina) treated at public hospitals in Brazil, implementation of a multifaceted intervention that included educational materials, checklists and reminders resulted in improvement in the use of evidence-based medicines during the first 24 hours of hospitalization, according to a study appearing in *JAMA*. The study is being published early online to coincide with its presentation at the American College of Cardiology's annual scientific sessions.

Cardiovascular diseases, especially acute coronary syndromes (ACS), are the leading cause of illness and death globally. Large-scale randomized trials have established the efficacy of several interventions for the care of patients with ACS; nevertheless, registries have consistently demonstrated that the translation of research findings into practice is suboptimal and that these care gaps are even greater in low- and middle-income countries, according to background information in the article.

"Changing clinical behavior to improve quality of care is challenging. Prior systematic reviews have suggested that certain quality improvement (QI) tools are associated with better quality of care," the authors write. "However, QI interventions have rarely been rigorously evaluated, especially in low- and middle-income countries, which account for up to 80 percent of the global burden of cardiovascular diseases."

Otávio Berwanger, M.D., Ph.D., of the Research Institute HCor–Hospital do Coração, São Paulo, Brazil and colleagues conducted a randomized trial (Brazilian Intervention to Increase Evidence Usage in Acute Coronary Syndromes; BRIDGE-ACS) to assess the effectiveness of a QI initiative in patients with ACS from public hospitals in an emerging economy setting. The trial was conducted among 34 clusters (public hospitals) in Brazil and enrolled a total of 1,150 patients with ACS from March 2011 through November 2011, with follow-up through January 27, 2012. The multifaceted QI intervention included educational materials for clinicians, reminders, checklists, and case manager training, vs. routine practice (control). Among the outcomes measured by the researchers was the percentage of eligible patients who received all evidence-based therapies (aspirin, clopidogrel, anticoagulation, and statins) during the first 24 hours in patients without contraindications. The average age of the patients enrolled was 62 years; 69 percent were men.

The researchers found that among eligible patients (923/1,150 [80.3 percent]), those in intervention cluster hospitals were more likely to receive all eligible acute therapies within the first 24 hours than those in control cluster hospitals (67.9 percent vs. 49.5 percent). Similarly, use of all evidence-based therapies during the first 24 hours and at discharge among eligible patients (801/1,150 [69.7 percent]) was higher in the intervention clusters vs. controls (50.9 percent vs. 31.9 percent). Overall composite adherence scores were also higher in QI intervention clusters than in control group clusters (89 percent vs. 81.4 percent).

Regarding the effect of the intervention on major clinical events at discharge, the rates of major cardiovascular events were 5.5 percent for patients from clusters randomized to the QI intervention and 7.0 percent in control group clusters, without a statistical significant difference. Total mortality rates at 30 days were 7.0 percent in patients from clusters randomized to the QI intervention and 8.4 percent in patients from

control group clusters.

"In conclusion, among patients with ACS, a simple multifaceted educational intervention resulted in significant improvement in the use of evidence-based medications, particularly in hospitals with percutaneous coronary intervention [procedures such as balloon angioplasty or stent placement used to open narrowed coronary arteries] capabilities and among patients with non–ST-segment elevation [a certain pattern on an electrocardiogram] ACS. Because this intervention is relatively simple and feasible, the approaches tested in the BRIDGE-ACS trial can become the basis for developing QI programs to maximize the use of evidence-based interventions for the management of ACS, especially in limited-resource settings. Large-scale international cluster-randomized trials with adequate power are warranted to assess the effect of QI interventions on clinical outcomes as well as on cost-effectiveness," the authors write.

More information: *JAMA*. 2012;307(19):doi:10.1001/jama.2012.413

Provided by JAMA and Archives Journals