# Missed Ischemia Linked to Poorer MI Care, Survival

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WASHINGTON — Myocardial infarction patients who did not have documented ischemic symptoms upon hospital admission received lower quality care, were prescribed fewer established therapies, and had significantly higher risk-adjusted in-hospital mortality than patients with documented ischemic symptoms, Erik Schelbert, M.D., reported at a meeting that was sponsored by the American Heart Association.

Patients without ischemic symptoms received significantly less treatment with aspirin or β-blockers, and underwent less reperfusion therapy. These patients who lacked symptoms of ischemia were also more likely to be female, nonwhite, and older than the symptomatic patients.

"Curiously, these trends continued until discharge," said Dr. Schelbert of the University of Iowa, Iowa City.

He presented data from the Prospective Registry Evaluating Outcomes After Myocardial Infarction: Events and Recovery (PREMIER) study, which enrolled 3,960 MI patients in 19 centers during January 2003 to June 2004.

Dr. Schelbert and his coinvestigators reviewed the charts of 3,825 patients, comparing Centers for Medicare and Medicaid Services performance measures and in-hospital death statistics to determine whether ischemic symptoms were documented. Trauma patients and those with acute gastrointestinal bleeding, stroke, or hip fracture were excluded.

A subgroup of 2,480 patients was interviewed within 2 days of admission to get their point of view of what brought them to the hospital.

Although data from other studies have shown that women, minorities, and older patients often don't show traditional symptoms for MI, this is ostensibly the first study that included patient interviews in order to link symptoms with outcomes.

Overall, 6.2% of the 3,825 patients had no ischemic symptoms documented in their charts upon admission, but of those who were interviewed, 72% had at least one symptom that would be considered ischemic according to current American Heart Association/American College of Cardiology guidelines.

The undocumented symptoms included shortness of breath (50%), chest pain (40%), and nausea (31%).

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Although troponin assays confirmed myocardial damage in all the patients, the disparities in care persisted through discharge.

"Because the lack of documented symptoms of MI and the following lesser-quality care were linked, we inferred that patients' symptoms were not recognized. Clearly, most patients actually did have symptoms, as the interviews then showed," said Dr. Schelbert.

It's possible that these patients had comorbidities that made a diagnosis of MI more difficult, he added.

Of those asymptomatic patients eligible during hospital admission, 85% received aspirin vs. 96% of those with symptoms, 64% received β-blockers within 24 hours vs. 85% of those with symptoms, and 18% received reperfusion therapy vs. 71% of patients with symptoms, all significant differences.

At discharge, those without ischemic symptoms were less likely to receive aspirin (86% vs. 94%), β-blockers (80% vs. 89%), or ACE inhibitors (58% vs. 69%).

Asymptomatic patients also were less likely to receive statin therapy for secondary MI prevention at LDL-cholesterol thresholds of 100mg/dL (70% vs. 87%) or 70 mg/dL (61% vs. 84%).

Unadjusted in-hospital mortality rates were also higher in patients without ischemic symptoms (15% vs. 3%).

"There is evidence of a significant breakdown in communication, and patient symptoms are being missed. The cause of this needs further investigation," Dr. Schelbert said.

The study was funded by grants from the Agency for Healthcare Research and Quality and CVT Therapeutics. ■