Serious Noncardiac Ills Seen With 1 in 12 MIs

BY BRUCE JANCIN
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ORLANDO, FLA. — One in 12 patients with acute MI presents with a concomitant acute potentially life-threatening noncardiac condition at admission, Judith H. Lichtman, Ph.D., reported at the annual meeting of the American College of Cardiology.

None of the current risk-adjustment models for MI patients that are widely used to guide clinical care and benchmark hospital and physician performance take account of these life-threatening noncardiac conditions.

Instead, the prognostic models are restricted to variables directly related to the patient's cardiovascular disease. That's largely because the models were developed using data from randomized clinical trials from which patients with significant comorbidities are generally excluded. As a consequence, the risk-adjustment models fail to account for much of the variation in short-term outcomes in MI patients, explained Dr. Lichtman of Yale University, New Haven.

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This is a glaring oversight, she stressed, because those one in 12 MI patients who have a dueling potentially life-threatening acute noncardiac condition account for a disproportionate share of total inpatient deaths. Indeed, in the Prospective Registry Evaluating Outcomes After Myocardial Infarction: Events and Recovery (PREMIER) study they had an in-hospital mortality of 20%, compared with 3% in MI patients without such comorbidities.

"We feel that in this study we've identified a very important subgroup of acute MI patients at increased risk for mortality that have really not been previously described in the literature," she added.

The PREMIER registry involved 3,948 acute MI patients prospectively enrolled at 19 participating U.S. medical centers during 2003-2004. Chart review showed 8% had an acute potentially life-threatening noncardiac condition at the time of admission. These were not chronic conditions such as arthritis or seizure disorders. The most common of these conditions included severe pneumonia requiring intubation, trauma, stroke, sepsis, severe GI bleeding, and hip fracture. Patients who present with one of these conditions in addition to an acute MI typically require care from multiple specialists, both cardiovascular and noncardiovascular.

The MI patients with acute potentially life-threatening noncardiac conditions in PREMIER presented differently from those with MI alone. They were older—a mean age of 62 years compared with 56—and more likely to be women and nonwhite. They also were more likely to have diabetes and hypertension and less likely to present with ST-elevation MI. And they were less likely to receive early therapy with aspirin, fibrinolytic agents, and β-blockers, as recommended in national guidelines.

After adjustment for the lesser use of guideline-based initial therapies for MI in the patients with potentially life-threatening comorbid conditions, along with differences in demographics, prior history, and clinical presentation, the patients still had a 4.9-fold increased risk of in-hospital mortality.

"I think this underscores a strong need to adopt a broader perspective of the clinical factors that contribute to the initial assessment, process of care, and outcomes for acute MI patients. …These factors need to be put on the radar of these risk-adjustment models," Dr. Lichtman concluded.

Session cochair Eric D. Peterson, M.D., of Duke University, Durham, N.C., who was a coinvestigator in the PREMIER registry, said that while most MI patients with an acute potentially life-threatening noncardiac condition are routinely admitted to coronary care units, it might make more sense for them to go directly to the intensive care unit, where caregivers are experienced in managing a wider array of very serious medical conditions. ■

Gender Differences Persist in Treatment, Survival After MI

BY SHARON WORCESTER
Tallahassee Bureau

ORLANDO, FLA. — Women presenting with myocardial infarction continue to receive less intensive treatment and have higher mortality than men with similar presentations, but the gender gap in medical interventions prescribed at hospital discharge may be narrowing, according to studies presented at an international conference on women, heart disease, and stroke.

One retrospective study included nearly 26,700 Swedish patients treated for ST-elevation MI (STEMI) at cardiac intensive care units during 1997-2001. Reperfusion therapy was administered to 71% of the 17,243 men in the study, compared with 62% of the 9,455 women in the study, Sofia Sederholm Lavesson, M.D., reported.

'Women with Q-wave acute MI continue to have significantly worse mortality rates and receive less revascularization than men.'

Men, compared with women, had lower in-hospital mortality (9% vs. 16%), 30-day mortality (11% vs. 18%), and 1-year mortality (16% vs. 25%), said Dr. Lavesson of Linköping (Sweden) University.

After adjusting for numerous confounding factors, women remained significantly less likely than men to receive reperfusion therapy (odds ratio 0.83) and to survive while in the hospital (OR 1.23), she said, noting that the differences between men and women cannot be fully explained by differences in age and comorbidities. "[Greater] age is the main explanation for the higher mortality in women, but less intensive treatment also appears to contribute," she said.

A similar conclusion was reached in a study of more than 55,000 patients admitted to any of 153 different hospitals with a primary diagnosis of Q-wave acute MI from January 2000 through June 2004.

Mortality was 13% in the 19,034 women in the study, compared with 7% in the 35,969 men. After adjusting for 24 variables, including age, various comorbidities, and type of hospital providing the treatment (heart surgery hospital, cath lab hospital, and hospital with no heart surgery or cath lab), men were shown to be less likely than women to die (OR 0.71). Additionally, men were more likely than women to be transferred for further treatment (OR 1.24), receive thrombolytics (OR 1.16), receive percutaneous coronary intervention (OR 1.12), and/or receive coronary artery bypass grafting (OR 1.64), reported Allan L. Anderson, M.D., of the Medical City Dallas Hospital.

"Women with Q-wave acute MI continue to have significantly worse mortality rates and receive less revascularization than men," he concluded, noting that additional research is needed to determine how women with MI can obtain clinical parity with men. But such parity is being achieved when it comes to the prescribing of medical interventions at hospital discharge in patients who present with heart attack or chest pain, a third study suggests.

That ongoing study showed such men and women are being prescribed appropriate drug interventions at the about the same frequency. The subanalysis of a National Institutes of Health–funded study of 177 men and 35 women with acute coronary syndrome showed that women were prescribed aspirin, β-blockers, and statins as frequently as men, however, it also showed that 10% of women with acute coronary syndrome didn't receive aspirin or β-blockers and that more than 30% didn't receive statins, Shu-Fen Wung, Ph.D., and Heather Hiscox of the University of Arizona, Tucson, reported in a poster.

Also, women in this study lived significantly longer than men following their hospitalization (179 days vs. 156 days), with both age and gender showing a significant association with 6-month survival. The findings suggest that more people are following the guidelines of the American Heart Association and American College of Cardiology, and that progress is being made in the treatment of both men and women, Dr. Wung said. ■

Facilitated PCI Cuts Delays in Acute Myocardial Infarction Treatment

BY MITCHEL L. ZOLER
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WASHINGTON — Lytic therapy and percutaneous coronary intervention now go hand in hand for treating acute myocardial infarction.

Until a few years ago, percutaneous coronary intervention (PCI) was contraindicated in patients with a thrombolytic drug on board, but today's widespread use of stents, thienopyridines, and glycoprotein IIb/IIIa inhibitors has made the routine use of PCI following lytic therapy a recommended strategy, C. Michael Gibson, M.D., said at a meeting sponsored by the Cardiovascular Research Institute at Washington Hospital Center. In fact, the strategy has a name: facilitated PCI.

Facilitated PCI is well suited for use at hospitals that don't have PCI capability on-site or immediately available by transfer. It is especially beneficial when the transfer time to start primary PCI takes more than 90 minutes, said Dr. Gibson of Brigham and Women's Hospital in Boston.

The problem is that some physicians remain reluctant to administer lytic therapy in advance of planned PCI, based on concerns left over from the days when this sequence was discouraged.

"If I can get a patient's artery open within 90 minutes [using PCI], I'll first administer Integrilin [eptifibatide] and bivalirudin, and in the cath lab I administer clopidogrel once we have determined the patient's coronary anatomy," said Dr. Gibson. "If the artery will not get open by PCI within 90 minutes I treat with TNK [TNK-TPA, tenecteplase], heparin, and a IIb/IIIa inhibitor, followed by PCI."

An exception is a patient older than 75 years, who should not receive a IIb/IIIa inhibitor along with a thrombolytic drug because of the increased risk of intracranial hemorrhage.

In patients older than 75, another good practice is to cut the dose of the thrombolytic agent by 25%.

After the thrombolytic agent is administered, coronary catheterization should still be done as quickly as possible, ideally within 2 hours of drug treatment, Dr. Gibson said. ■