Coronary Artery Bypass: Diagnosis, Prognosis and Treatment Patterns
Tuesday, March 14, 2006, 12:30 p.m.-4:00 p.m.
Georgia World Congress Center, Hall B1
Presentation Hour: 1:30 p.m.-2:30 p.m.

Abstract 1223
Are High-Risk Hypertensive Patients Prescribed Concomitant Statin Therapy? Prescriptions Patterns in Patients Initiating Antihypertensive Therapy in the United States

Background: Recent large clinical trials have demonstrated that concomitant use of a statin and an angiotensin-converting enzyme inhibitor or angiotensin receptor blocker decreases the risk of cardiovascular death, nonfatal myocardial infarction, and nonfatal stroke in patients with hypertension. Hypertensive patients are at increased risk of myocardial infarction, stroke, and death from cardiovascular disease, so preventing these events may be the cornerstone of management. Therefore, concomitant prescription of statins and angiotensin-converting enzyme inhibitors or angiotensin receptor blockers in hypertensive patients may be justifiable. However, it is unknown whether hypertensive patients are receiving concomitant therapy in the United States.

Methods: The MarketScan Commercial Claims Database was used to identify enrollees age 65 years and older starting anti-hypertensive therapy between 2001 and 2002. The sample was matched by date of birth, sex, and zip code to a control sample of enrollees under age 65 years who were not receiving anti-hypertensive therapy at the time of the claim. A total of 718,924 enrollees were included in the study, of whom 179,841 were hypertensive patients and 539,083 were matched controls. The primary outcome of interest was the concomitant prescription of at least one statin and one angiotensin-converting enzyme inhibitor or angiotensin receptor blocker during the 12-month follow-up period. The secondary outcomes were the concomitant prescription of at least one statin and one angiotensin-converting enzyme inhibitor or angiotensin receptor blocker during the first 30 days of therapy.

Results: Among hypertensive patients, there were 2.1% who were prescribed concomitant statin therapy in the first 30 days of therapy. In year 1, 4.6% did not receive concomitant therapy. Of these, 3.8% were prescribed concomitant therapy in year 2 and 3.3% did not receive concomitant therapy. In year 2, 2.7% and 3.2% were prescribed concomitant therapy and did not receive concomitant therapy, respectively. The rate of concomitant therapy increased to 9.0% in year 3. Of these, 6.7% did not receive concomitant therapy. In year 3, 8.5% and 9.0% were prescribed concomitant therapy and did not receive concomitant therapy, respectively. The rate of concomitant therapy increased to 11.3% in year 4. Of these, 8.3% did not receive concomitant therapy. In year 4, 10.8% and 11.3% were prescribed concomitant therapy and did not receive concomitant therapy, respectively. The rate of concomitant therapy increased to 12.6% in year 5. Of these, 10.6% did not receive concomitant therapy. In year 5, 12.1% and 12.6% were prescribed concomitant therapy and did not receive concomitant therapy, respectively.

Conclusions: Concomitant prescription of statins and angiotensin-converting enzyme inhibitors or angiotensin receptor blockers in hypertensive patients is low in the United States. Further research is needed to determine whether these patients are receiving optimal care.

Abstract 1224
Association of Variant Alleles of Peroxiredoxin and Endothelial Nitric Oxide Synthase Genes With Early Onset of First Myocardial Infarction

Background: Peroxiredoxin (PER) 1 and endothelial nitric oxide synthase (eNOS) are antioxidant enzymes that protect the cardiovascular system from oxidative stress. Differences in these genes may increase the risk of myocardial infarction (MI) by affecting antioxidant defense mechanisms. Variation in the coding sequence of PER1 and eNOS have been associated with MI risk in European populations, but not in Asian populations. This study evaluated the association between variant alleles of PER1 and eNOS and early onset of MI among patients of Chinese ethnicity.

Methods: DNA was extracted from peripheral blood leukocytes of 60 patients with early onset MI and 120 age- and sex-matched controls. Single nucleotide polymorphisms in the coding region of PER1 and eNOS were identified using direct sequencing. The association between early onset MI and variant alleles was assessed using logistic regression analysis.

Results: The variant allele frequency of PER1 was 0.05 in the early onset MI group and 0.03 in the control group. The variant allele frequency of eNOS was 0.04 in the early onset MI group and 0.03 in the control group. The variant allele frequency of PER1 was significantly higher in the early onset MI group compared to the control group (OR: 2.2; 95% CI: 0.9-5.4). The variant allele frequency of eNOS was also significantly higher in the early onset MI group compared to the control group (OR: 1.9; 95% CI: 0.9-4.0). The variant allele frequency of both PER1 and eNOS was significantly higher in the early onset MI group compared to the control group (OR: 2.0; 95% CI: 0.9-4.3).

Conclusions: The variant alleles of PER1 and eNOS are associated with early onset of MI among patients of Chinese ethnicity. These findings suggest that these genes may play a role in the development of early onset MI.