Drug Monitor

Eplerenone Decreases Hospitalization Time

Eplerenone after index acute myocardial infarction (AMI) was associated with decreased hospitalization time in patients who were later hospitalized for heart failure (HF), according to researchers from Feinberg School of Medicine, Chicago, IL; Monash University, Melbourne, Australia; Pfizer Inc., New York, NY; and University of Michigan, Ann Arbor.

They studied a subset of patients from the international Eplerenone Post-Acute Myocardial Infarction Heart Failure Efficacy and Survival Study (EPHESUS), which investigated eplerenone's effects on patients with left ventricular ejection fraction and HF or diabetes after AMI. The EPHESUS investigators gathered a sample of 6,632 such patients, randomly assigned 3,319 of them to receive eplerenone and 3,313 to receive placebo (in addition to the standard therapy received by all patients), and found that eplerenone improved long-term mortality and morbidity.

The subset study sought to determine how eplerenone affected the length of stay per HF hospitalization and the total number of days of HF hospitalization in the 828 EPHESUS patients who were hospitalized for HF after index AMI. It also looked for differences in hospitalization time according to which of the five geographic regions represented in EPHESUS (North America, Western Europe, Eastern Europe, South America, and the rest of the world) these patients were treated in.

The results indicate that eplerenone significantly reduced both the mean length of stay per HF hospital-ization and the mean total number of days of HF hospitalization. Over a mean follow-up of 16 months, the 387 patients who received eplerenone stayed in the hospital for a mean of 9.2 days per HF hospitalization, while the 441 patients who received placebo stayed in the hospital for a mean of 10.8 days per HF hospitalization—a difference of 1.6 days (P = .019). In addition, patients in the eplerenone group had a mean total of 13.3 HF hospitalization days and patients in the placebo group had a mean total of 16.9 HF hospitalization days—a difference of 3.6 days (P = .0006). Eplerenone's benefits were consistent throughout all five regions.

The researchers say that the exact mechanisms of these benefits are not well understood. They add that, while patients who received eplerenone had slightly higher rates of hyperkalemia than patients who received placebo, careful monitoring and adjustment of serum potassium can reduce the risks associated with hyperkalemia.

Antiosteoporotic Medication Adherence

Patient adherence is a key factor in the success of drug treatments for osteoporosis. So what is the long-term rate of adherence to such treatments among postmenopausal women, and what factors influence their adherence?

Researchers from Rambam Health Care Campus and Technion-Israel Institute of Technology, both in Haifa, Israel investigated these questions by following up on 178 postmenopausal women who were prescribed anti-osteoporotic medication. Of these patients, 115 (65%) were prescribed alendronate 10 mg/day and 63 (35%) were prescribed raloxifene 60 mg/day. The patients began their treatment in a clinic and were monitored there for six months, after which their treatment was continued by family physicians. At the beginning of treatment, providers explained the treatments' risks and benefits in detail, emphasized the importance of adherence, and described possible treatment alternatives that could be used in the case of adverse events.

The researchers gathered information on patients' age, family history of osteoporosis, bone mineral density (BMD) at treatment initiation, and history of fractures. During a clinic visit at six months after treatment initiation, they assessed patients' medication adherence and their reasons for treatment discontinuation or change. And at two years after treatment initiation, they assessed the same information through a telephone survey.

The patients had a mean age of 67.4 years. Although 137 patients (77%) continued to adhere to treatment at six months, this number dropped to 78 (44%) at two years. At the latter time point, 22% of patients had stopped taking their original medication, 10% had changed to another therapy, and 12% were lost to follow-up. Age, family history of osteoporosis, previous fracture history, and initial BMD did not influence patients' medication adherence.

At two years, treatment had been discontinued by 26 patients (23%) in the alendronate group and 13 patients (21%) in the raloxifene group—a difference that was not statistically significant. Of the patients in the

alendronate group, 15 (13%) discontinued the drug because of nonadherence, eight (7%) did so because of upper gastrointestinal adverse events, two (2%) did so because of a BMD increase (creating the impression of cure), and one (1%) did so because of suspected primary hyperparathyroidism. In addition, two (2%) patients in this group switched drugs because of abdominal pain, one (1%) did so because of a BMD decrease, and one (1%) did so because of high drug cost. Of the patients in the raloxifene group, seven (11%) discontinued the drug because of nonadherence, four (6%) did so because of a BMD increase, four (6%) did so because of high drug cost, and one (2%) did so following diagnosis of uterine carcinoma. Furthermore, five (7%) patients in this group switched drugs because of a BMD decrease, one (2%) did so because of deep vein thrombosis, and one (2%) did so because of flushing. The frequency of adverse events did not differ significantly between the groups.

The researchers say that, while they expected such factors as family history, previous fracture, or BMD to improve adherence, the adherence issue appears to be "much more complicated." They add that many factors influencing medication adherence remain unknown, no intervention to enhance adherence robustly has been found, and more data on the issue need to be collected. In the meantime, they say, providers should adopt multifaceted interventions and practical approaches, as well as consider patients' perspectives, when they attempt to encourage medication adherence. ●