Drug Monitor

Metoclopramide Without Akathisia

Metoclopramide is an effective treatment for nausea, vomiting, and headache. Noting that the drug can have the adverse effect of acute akathisia, however, researchers from New York University Medical Center/Bellevue Hospital Center, New York wondered whether infusing it at a slower rate could decrease the incidence of this effect while maintaining the drug's benefits.

To find out, they conducted a prospective, randomized clinical trial of 68 patients who were treated with metoclopramide for nausea, vomiting, or headache in an emergency department (ED). Of these patients, 36 received the drug as a two-minute bolus and 32 received it as a 15-minute slow infusion. To maintain double blinding, patients in the bolus group also received a placebo as a 15-minute infusion, patients in the slow infusion group also received a placebo as a two-minute infusion, and the administering nurses were not informed of which infusions were placebos and which were metoclopramide.

In addition, patients in both groups were given pretreatment and posttreatment evaluations for akathisia on the Prince Henry Hospital (PHH)–modified akathisia scale and for their presenting symptoms on a 10-point visual analog scale (VAS). They were considered to have developed drug-induced akathisia if their PHH score increased significantly between the two evaluations or if they departed from the ED suddenly and without an explanation after treatment. Patients were considered to have experienced symptom improvement if their VAS score decreased by two or more points between the evaluations.

The researchers found that six (11.1%) of the patients in the bolus group developed akathisia—four based on PHH scale increases and two based on departures from the ED. In contrast, none of the patients in the slow infusion group developed the condition. There were no differences in symptom improvement between the groups.

These results indicate that slowing the rate of metoclopramide infusion can reduce the incidence of akathisia, according to the researchers. They add that the two patients who departed from the ED suddenly may not have developed akathisia and that the between-group differences are not significant when these patients are not included. Nevertheless, they say, the departures were unusual and, in their view, worth counting as akathisia.

Source: *Am J Emerg Med.* 2009;27(4):475–480. doi:10.1016/j.ajem.2008.03.044.

Aspirin and Endocarditis

As *Staphylococcus aureus* infective endocarditis (SA-IE) has a mortality rate of more than 20%, researchers are on the lookout for adjunctive modalities to improve patient outcomes. Could aspirin be such a modality?

The International Collaboration on Endocarditis (ICE) Investigators attempted to find out through an observational, quasi-experimental study on patients from the ICE Prospective Cohort Study database, which includes 2,760 patients with infective endocarditis from 61 facilities in 28 countries. The investigators selected 670 patients with SA-IE for whom data on aspirin use at the time of SA-IE diagnosis was available. Next, they performed a multivariable analysis to look for differences in outcomes between the 132 patients who were taking aspirin at diagnosis and the 538 patients who were not.

They found that aspirin use was significantly associated with a decreased rate of acute valve replacement surgery—particularly when such surgery was indicated by valvular regurgitation, congestive heart failure, or periannular abscess. Aspirin use also was associated with new-onset valvular regurgitation that was moderate to severe. There were no between-group differences in the occurrence of all-cause strokes, but aspirin use had a negative association with hemorrhagic stroke that approached significance. Although aspirin use was significantly associated with mortality at one-year follow-up, it was not associated with in-hospital mortality, and the investigators conclude that it appears to be safe for patients with SA-IE.

Overall, the researchers say, aspirin "may well improve IE outcomes through reduced need for surgery." They also note that aspirin "does not have potent growth inhibitory or bactericidal activity against SA" and that SA is unlikely to develop resistance to aspirin's bio-metabolic and genetic pathway effects.

Source: *J Infect.* 2009;58(5):332–338. doi:10.1016/j.jinf.2009.03.006.