Drug Monitor

Assessing Heparin Risk in the ED

Patients who present to the emergency department (ED) with chest pain or symptoms of thrombosis are candidates for heparin therapy. But about one in 13 of these patients may be at increased risk for heparin-induced thrombocytopenia (HIT), say researchers from the Florida Hospital Institute of Translational Research, Orlando, FL; University of Texas School of Medicine at Houston; and Clinical Science Consulting, Austin, TX.

The researchers conducted a prospective study to determine the prevalence of antibodies to the heparin–platelet factor 4 (PF4) complex, a risk factor for HIT, in 324 ED patients with symptoms of acute coronary syndrome or arterial or venous thrombosis. In addition to testing blood samples from these patients for the antibodies, the researchers tested positive samples for platelet-activating antibodies.

A total of 24 patients (7.4%) tested positive for heparin-PF4 antibodies. Although the difference was not statistically significant, patients who had been hospitalized within the previous six months had a greater antibody prevalence (9.2%) compared with those who had not been recently hospitalized (4.7%). The prevalence was similar between patients who presented with symptoms of acute coronary syndrome and those who presented with symptoms of thrombosis (6.9% and 8.6%, respectively; $P = .64$). Of the 22 patients with heparin-PF4 antibodies who were able to be tested for platelet-activating activity, eight (36%) tested positive (including seven who were recently hospitalized).

While a platelet count is important for diagnosing HIT, the researchers say, it doesn't appear to correlate with the presence of heparin-PF4 antibodies. They suggest that a history of recent heparin exposure—or, when this factor is unknown, a history of recent hospitalization—may be a better predictor. And if the antibodies are present, the researchers advise using alternative, nonheparin anticoagulation.

Source: *Am J Emerg Med.* 2007;25(3):279–284. doi:10.1016/j.ajem.2006.07.015.

Natural vs. Prescription Laxatives in LTC Patients

Constipation is common among elderly residents of long-term care (LTC) facilities, due to age-related changes, dietary insufficiencies, disease complications, and adverse reactions to prescription medications (such as opioids, calcium channel blockers, anticholinergics, and antidepressants). And while pharmacologic treatments are prescribed frequently, their routine use is hampered by adverse effects and low effectiveness.

A viable alternative may be a fruit-based natural laxative mixture, according to findings from a randomized, controlled, pilot study by researchers from Methodist Hospital, Indianapolis, IN; University of Illinois at Chicago College of Nursing; Millikin University, Decatur, IL; and Arizona State University, Tempe. This study pitted the natural mixture against prescription laxatives in 45 elderly residents of a 200-bed, Midwestern, hospital-affiliated, skilled LTC facility.

During a four-week preintervention phase, all patients took their regularly prescribed laxatives. Over the next four weeks, the control group continued these medications while the treatment group switched to a regimen of 2 tablespoons of the natural mixture (made of raisins, currants, prunes, figs, dates, and undiluted prune juice) twice daily. The researchers collected data on bowel movement frequency and consistency, the ease of administering the natural mixture, and the retail costs of both types of laxatives.

Of the 45 patients enrolled, 34 completed the trial (16 in the treatment group and 18 in the control group). During the intervention phase, the mean number of bowel movements increased significantly in the treatment group but not in the control group. Most (90% to 92%) of the nursing staff reported that the natural mixture was "easy" or "very easy" to administer. And the natural mixture cost just $0.30 per patient per day, compared to an average of $0.52 for the prescription laxatives.

Notably, the observational study by Beverly and Travis that introduced this natural laxative mixture showed equivalent—not superior—efficacy compared to pharmaceutical laxatives. The authors of the current study suggest several possible reasons for this difference. First, their study patients had many different diagnoses, while the earlier study involved only patients with Alzheimer disease or senile dementia. Second, they treated patients for four weeks, compared to 12 weeks in the earlier study. And perhaps most significantly, their patients took 2 tablespoons of the laxative mixture twice daily, rather than once daily as in the earlier study. The researchers call for a larger, double-blind trial to clarify these issues. In the meantime, they stress the importance of individualizing constipation treatment.

Source: *Geriatr Nurs.* 2007;28(2):104–111. doi:10.1016/j.gerinurse.2006.

Continued on page 46

Continued from page 44

Resistance Narrows Options for Gonorrhea Treatment

Due to increased resistance, the CDC no longer recommends fluoroquinolones for the treatment of gonococcal infections and related conditions, such as pelvic inflammatory disease. *Neisseria gonorrhoeae* resistance to fluoroquinolones has spiked dramatically over the past decade, from less than 1% before 2002 to 13.3% in early 2006. In 2002, the CDC recommended that fluoroquinolones not be used to treat gonorrhea in California and Hawaii, and in 2004, they extended this recommendation to all male patients who engage in homosexual sex. In the past few years, the rate of resistant organisms in heterosexual male patients has increased substantially, leading to the most recent recommendation.

This leaves the cephalosporins as essentially the last bastion for infected patients. For those with allergies to penicillin or cephalosporin, spectinomycin is an alternative, but this drug isn't available in the United States. Azithromycin is effective against uncomplicated gonococcal infections, but the CDC doesn't recommend its widespread use given that the drug has its own problems with resistance. The CDC still advises that patients with gonococcal infection be given a single dose of azithromycin or a seven-day course of doxycycline for possible coinfection with *Chlamydia trachomatis*.

Because resistance is so drastically curtailing treatment options, the CDC is urging state and local health department laboratories to maintain or develop the capacity to perform cultures in order to monitor any emergence of cephalosporin resistance. ●

Source: *MMWR Morb Mortal Wkly Rep.* 2007;56(14):332–336.