Drug Monitor

Antidepressants and Bleeding Risk

Patients taking serotonergic antidepressants may be at higher risk for bleeding during orthopedic surgery, according to a team of researchers from Utrecht University, Utrecht and St. Elisabeth Hospital, Tilburg, both in the Netherlands. Their retrospective, follow-up study revealed that the need for perioperative blood transfusions almost quadrupled in patients taking these antidepressants compared to nonusers.

Of the 685 orthopedic procedures performed at the study hospital between January 1999 and December 2000, 520 were included for analysis. Perioperative blood transfusions were needed in 59 (11%) of these patients. The mean blood loss and fluid infusion volume during surgery were 1,277 mL and 3,016 mL, respectively, compared with 445 mL and 2,309 mL for patients who didn't receive transfusions. Overall, 26 patients (5%) were using serotonergic antidepressants before surgery. Of those, six (23%) received perioperative blood transfusions. Use of the antidepressants was associated significantly with increased blood loss during surgery (1,109 mL for users versus 582 mL for nonusers).

Previous reports had associated serotonergic antidepressants with bleeding disorders, which had raised concerns about the safety of these drugs for older patients. One study, for instance, showed an absolute risk of eight new serotonergic antidepressant-induced gastrointestinal hemorrhages per 1,000 people per year in elderly patients.

The primary reason for the increased risk, say the researchers, may be reduced intraplatelet serotonin concentrations, which can affect platelet aggregation. Lower platelet serotonin levels and a concurrent rise in plasma serotonin levels have been associated with surgical procedures, so patients experiencing stress from surgery may be at higher risk for bleeding complications because of platelet impairment. These two effects, they say, may act synergistically and negatively on hemostasis. The researchers also suggest that recombinant human erythropoietin could reduce the need for allogeneic blood transfusion, but such treatment wasn't used routinely during the study period.

Source: *Arch Intern Med.* 2003; 163:2354–2358.

Is Eight Really Enough?

Ventilator-associated nosocomial pneumonia is—because of its frequency and severity—one of the principal reasons antibiotics are prescribed to patients in the intensive care unit (ICU). While the standard length of treatment is 15 days, a group of French researchers from the PneumA Trial Group assert that eight days of antibiotic therapy may be just as effective—and may help contain the emergence of multiresistant bacteria in the ICU.

The researchers compared the two treatment durations in 401 patients at 51 French ICUs. Mortality rates were similar in both groups (18.8% in the eight-day group and 17.2% in the 15-day group). Both groups also had similar rates of recurrent infections (28.9% versus 26%, respectively), duration of mechanical ventilation, number of days free of organ failure, and length of ICU stay. But the eight-day group had, on average, 50% more days free of antibiotics. That alone could make the shorter treatment pay off, the researchers suggest, but combined with the fact that multiresistant pathogens emerged more frequently in the 15-day group (62.3% versus 42.1%), the results underscore the importance of discouraging the indiscriminate use of antibiotics. ●

Source: *JAMA.* 2003;290: 2588–2598.

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