CLINICAL CAPSULES

Bronchiolitis Management Varies

Significant variations in the use of diagnostic tests and medications for bronchiolitis persisted among hospitals even after controlling for covariates in 17,397 patients younger than 1 year who were hospitalized, reported Dimitri A. Christakis, M.D., and colleagues at the Children's Hospital and Regional Medical Center, Seattle. The regression analysis included data from the Pediatric Health System database on patients at 36 freestanding, noncompeting children's hospitals. The mean age was 4 months, and 59% were male (Pediatrics 2005;115:878-84). Overall, the most common diagnostic or treatment approaches included chest radiographs (72%), antibiotics (45%), and systemic steroids (25%)—the use of chest radiographs ranged from 38% to 89%, and use of any antibiotics ranged from 28% to 62%. Severity of illness was controlled for and was probably not the main cause of the variations, the investigators noted.

The mean length of stay was 2.9 days. The use of antibiotics, bronchodilators, and corticosteroids was associated with increases in length of stay (LOS). The hospital itself was a significant contributor to mean LOS, which ranged from 2.4 to 3.9 days. However, children with an LOS of 2 days or more were significantly less likely to be readmitted compared with those with a 1-day LOS.

OK to Overlook Hematuria?

Diagnostic evaluation of microscopic hematuria in asymptomatic children may be unnecessary, said Jerry Bergstein, M.D., and his colleagues at Indiana University School of Medicine, Indianapolis (Arch. Pediatr. Adolesc. Med. 2005;159:353-5). A review of 342 children with microscopic hematuria yielded no cause in 274 patients. Hypercalciuria, the most common cause, occurred in 16% of the patients, followed by glomerulonephritis in 1%. Although hypercalciuria can increase the long-term risk for nephrolithiasis, no long-term studies indicate any preventive benefits from early detection. In addition, none of the children with microscopic hematuria had a urinary tract infection, which argues against urine cultures for asymptomatic patients. However, long-term follow-up remains essential to preempting significant renal disease. The recommendation to abstain from further evaluation in asymptomatic children "in no way repudiates the value of evaluating hematuria when found in a search for renal or urinary tract diseases," F. Bruder Stapleton, M.D., of Children's Hospital and Medical Center, Seattle, wrote in an accompanying editorial (Arch. Pediatr. Adolesc. Med. 2005;159:398-9).

Heart Rate Impacts Sepsis

Abnormal heart rate characteristics (HRC) were significantly associated with sepsis in a prospective study of 678 consecutive infants, said M. Pamela Griffin, M.D., and her associates at the University of Virginia, Charlottesville (Pediatrics 2005;115:937-41).

HRC was measured every 6 hours and was available 92% of the time. Prior to showing clinical signs of sepsis, neonates demonstrated reduced heart rate variability and decelerations. Three levels of risk—high, intermediate, and low—were calculated based on HRC model values, with HRC values above the 90th percentile defined as high risk. Overall, 42% of readings within 6 hours of a positive blood culture landed in the high-risk range, and an additional 30% landed in the intermediate-risk range. The odds ratio for sepsis based on HRC monitoring remained unchanged when the investigators ignored data from the blood cultures, which suggests that HRC provides adjunct, independent information to laboratory tests for the diagnosis of sepsis. Dr. Griffin owns a partial share in Medical Predictive Science Corp. which supplied partial funding for the study.

Fecal *H. pylori* Test Is Effective

The *Helicobacter pylori* fecal test is simple, appropriate, and accurate for screening of *H. pylori*–positive patients, reported Tamara Sabbi, M.D., of Belcolle Hospital, Viterbo, Italy, and her associates. In a prospective study of 250 patients aged 3-18 years (mean age 11 years) with suspected upper gastrointestinal disease, 93 (37%) tested positive for *H. pylori* after undergoing the standard procedure—upper gastrointestinal endoscopy with gastric biopsy (Arch. Pediatr. Adolesc. Med. 2005;159:238-41). The fecal antigen test for *H. pylori* demonstrated 97% sensitivity, a 98% specificity, a positive predictive value of 97%, and a negative predictive value of 98% in this patient population. There were no significant clinical differences between the infected and noninfected children, which highlights the need for effective, noninvasive tests. The investigators also evaluated the urea breath test, which was extremely effective but significantly more expensive and less available than the fecal antigen test.

—Heidi Splete