

What's new in pediatrics

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Febrile young infants — Two observational studies in febrile young infants (≤ 90 days), evaluated at a pediatric emergency department, suggest that elevated blood procalcitonin (PCT) may be an indicator of serious bacterial illness (SBI). Recent immunization increased median PCT, but median PCT levels still were higher in infants with SBI regardless of immunization status. However, because of questions regarding the reliability of the bedside test that was used, further research is needed before PCT can be recommended for routine use in the evaluation for SBI in febrile young infants.

Inguinal hernia repair — In children with asymptomatic inguinal hernias, longer waiting time for elective surgery is associated with increased risk for incarceration, especially in infants less than one year of age. An observational study from Canada found that a wait time for surgery that exceeded 14 days from the time of diagnosis in a physician's office was associated with an absolute increase of 7 percent (12 versus 5 percent) in the occurrence of incarceration in infants and young children (<1 year of age).

Introduction of solid foods — The American Academy of Pediatrics (AAP) Committee on Nutrition suggests that infant cereals and puréed

meats be offered to infants as the initial solid foods rather than puréed fruits and vegetables. Infant cereals and pureed meats provide iron and zinc, which are the nutrients most likely to be deficient in the diets of infants in the United States.

Virus induced wheezing — The optimal management for acute episodes of virus-induced wheezing in preschool children has yet to be determined. A multicenter trial evaluated the efficacy of a five-day course of oral prednisolone in 700 preschool children (10 to 60 months) hospitalized with acute mild to moderate virus-induced wheezing. Treatment with prednisolone did not shorten hospital stay, reduce albuterol use, or improve symptom scores. Although systemic glucocorticoids do not appear beneficial for all children with acute virus-induced wheezing, whether subgroups (eg, those with recurrent episodes of virus-induced wheezing, atopic features) may benefit is unknown.

Montelukast in acute bronchiolitis — The potential role of montelukast (a leukotriene receptor antagonist) in the treatment of acute bronchiolitis was evaluated in a randomized trial in 53 infants and young children. Treatment with montelukast during hospitalization did not affect the clinical course or length of stay.

Pneumococcal meningitis — Among children younger than two years of age in the United States, the rate of pneumococcal meningitis declined by 64 percent after the pneumococcal conjugate vaccine (PCV7) was added to the universal infant immunization schedule (from 10.2 to 3.7 cases per 100,000 between 1998-1999 and 2004-2005). However, during the same time period, the rate of cases caused by serotypes that are not contained in PCV7 increased by 275 percent (from 0.77 to 2.87 cases per 100,000). Serotypes 19A and 22F were the most common nonvaccine isolates. Continued surveillance is necessary to determine the need for modification or expansion of serotypes contained in the vaccine.

Respiratory distress syndrome — In the first clinical trial which

compared the combination of surfactant therapy and continuous positive airway pressure (CPAP) to CPAP alone in preterm infants less than 31 weeks gestation, infants who received combination therapy were less likely to require mechanical ventilation, and develop air-leak syndrome or bronchopulmonary dysplasia.

Evaluation of simple febrile seizures — A recent study challenges the recommendation that lumbar puncture is required for evaluation of infants after a first simple febrile seizure. A review of cerebrospinal fluid results in 268 patients aged 6 to 18 months who had a lumbar puncture after a first simple febrile seizure revealed no diagnoses of bacterial meningitis.