

CLINICAL CAPSULES

Predictors of Prolonged Otitis Media

The risks of prolonged acute otitis media in children who are not initially treated with antibiotics are twice as high if the patients are aged younger than 2 years and have acute bilateral infection, compared with older children who have unilateral infection, according to a meta-analysis.

"These features ... [can] inform parents about the course of their [children's] AOM [acute otitis media] and explain which features should prompt them to contact their clinician for reexamination," wrote Maroeska M. Rovers, Ph.D., of Julius Center for

Health Sciences and Primary Care, and Wilhelmina Children's Hospital, University Medical Center Utrecht, the Netherlands, and coauthors (*Pediatrics* 2007;119:579-85).

The meta-analysis included six randomized controlled trials of children aged 6 months to 12 years with AOM who were randomized to antibiotic therapy or observation (placebo or no treatment). The 824 patients in the observation arms were included in the analysis. The primary outcome was a prolonged infection defined as fever and/or pain at 3-7 days. The predictors analyzed included age, gender, season, hav-

ing been breast-fed or not, presence or absence of recurrent AOM, and numerous baseline symptoms. Of the 824 children, 303 (37%) had fever and/or pain at 3-7 days.

The absolute risks of pain and/or fever at follow-up were highest for children aged under 2 years with bilateral infection (55%) and lowest for those aged 2 years or older with unilateral infection (25%). The independent predictors of pain and/or fever at follow-up were age less than 2 years (odds ratio 2.1) and bilateral AOM (OR 1.7).

Pediatric Obesity, OM Link

Obesity may be linked to the development of otitis media with effusion in children,

Dr. Jong Bin Kim and coauthors wrote.

They found significantly higher body mass index (BMI) and cholesterol in children hospitalized for ventilation tube insertion because of otitis media with effusion (OME), compared with children undergoing other surgical procedures (*Arch. Otolaryngol. Head Neck Surg.* 2007;133:379-82).

Dr. Kim of Kyung Hee University, Seoul, Korea, and associates prospectively examined rates of obesity, total cholesterol, and serum triglycerides in 273 hospitalized children aged 2-7 years: One hundred fifty-five received uni- or bilateral ventilation tube insertion for OME, and 118 had other surgical procedures.

The mean BMI was significantly higher in the OME group (22 kg/m² vs. 16 kg/m²). Total cholesterol also was significantly higher in the OME group (195 mg/dL vs. 159 mg/dL). There was no significant difference in the total triglyceride level (109 mg/dL vs. 90 mg/dL).

In the OME group alone, they found that significantly more of the children were obese than were not (58% vs. 42%). However, there were no significant associations with the frequency of ventilation tube insertion and BMI, total cholesterol, or total triglycerides.

OM, PET Insertions Down Since PCV7

After the routine administration of the seven-valent pneumococcal conjugate vaccine began in mid-2000, the frequency of otitis media and pressure-equalizing tube (PET) insertions in children in Tennessee and New York born between 2000 and 2001 decreased significantly, compared with children born between 1998 and 1999, data from a large birth cohort analysis showed.

Dr. Katherine A. Poehling of the department of pediatrics at Wake Forest University, Winston-Salem, N.C., and colleagues reviewed the records of 150,122 children enrolled in Tennessee's managed care program, TennCare, and 26,409 children enrolled in three commercial managed care organizations in the Rochester, N.Y., area since birth. They focused on four birth cohorts: children born between July 1, 1998, and June 30, 1999, 1999-2000, 2000-2001, and 2001-2002. For each cohort, they estimated the cumulative proportion of children who developed frequent OM or had PETs inserted (*Pediatrics* 2007;119:707-15).

The proportion of children who received at least three doses of the PCV7 vaccine increased from 0% in the 1998-1999 birth cohort to about 75% in the 2000-2001 birth cohort. By age 2 years, 29% of children in Tennessee and New York who were born in 2000-2001 developed frequent otitis media and 6% had pressure-equalizing tubes inserted.

When the 2000-2001 and 1998-1999 cohorts were compared, the frequency of OM in Tennessee and New York dipped by 17% and 28%, respectively, and PET insertions by 16% and 23%. When the 2000-2001 and 2001-2002 cohorts were compared, the cases of frequent OM and the need for PET insertion remained stable in New York but increased in Tennessee. The study was funded by the Centers for Disease Control and Prevention, the American Teachers of Preventive Medicine/CDC, the National Institute of Allergy and Infectious Diseases, and the Robert Wood Johnson Generalist Physician Faculty Scholars Program.

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