CLINICAL CAPSULES

More Miss Day Care With Rotavirus

Rotavirus is a common cause of gastroenteritis that, in a review of 284 cases, was significantly more likely to keep children younger than 3 years of age away from day care, compared with nonrotavirus gastroenteritis.

A total of 115 cases (40%) were confirmed rotavirus infections. Overall, 70% of children with rotavirus gastroenteritis missed at least 1 day of day care, compared with 55% of children with nonrotavirus gastroenteritis, reported Dr. Susan E. Coffin of the University of Pennsylvania, Philadelphia, and her colleagues (Pediatr. Infect. Dis. J. 2006;25:584-9).

Children aged 7-12 months were the hardest hit; 54% of both the 7- to 9-month-olds and the 10- to 12-month-olds had rotavirus infections. By contrast, nonrotavirus infections peaked in children aged 4-6 months (72%).

The researchers collected stool samples from children with acute gastroenteritis at five urban and suburban pediatric practices during the winter-to-spring seasons of 2002-2003 and 2003-2004. The study was supported by Merck and Co.

Children with rotavirus infections were significantly more likely than those with nonrotavirus infections to exhibit vomiting (83% vs. 66%), a combination of diarrhea and vomiting (75% vs. 50%), or fever (60% vs. 43%).

Rotavirus had a significant impact on parents, too. Parents or guardians of the children with rotavirus were significantly more likely to miss at least 1 day of work than parents of children with nonrotavirus infections (62% vs. 40%).

The proportion of children who needed additional medical care, including hospitalization, was similar among both rotavirus and nonrotavirus cases.

Extreme Fevers May Merit Antibiotics

Children with very high fevers are at increased risk for both bacterial and viral illness, and clinical features don't reliably distinguish between the two conditions.

Dr. Barbara W. Trautner of Baylor College of Medicine, Houston, and her colleagues identified 103 cases of hyperpyrexia—defined as a rectal temperature of 106 ° F or higher—in a review of 130,828 patient visits (1 case per 1,270 visits).

The researchers found that 20 of these children (19%) had serious bacterial infections and 22 (21.4%) had laboratory-confirmed viral illness (Pediatrics 2006;118;34-40).

About a third of the children (35%) had fevers that lasted longer than 48 hours, and the cause of the fever was unknown in 60 children (58%).

The incidence of serious bacterial infection in children with underlying illnesses was more than double that in children without underlying illness (37% vs. 16%). But no other factors, including age and maximum temperature, were significantly predictive of serious bacterial infection compared with viral infection. Notably, the differences in white blood cell counts were not significant enough to be helpful in distinguishing bacterial vs. viral illness, although the median WBC was insignificantly higher in cases of viral illness.

The increased use of rapid testing continues to raise awareness of bacterial and viral coinfection, but only one child of 103 had a coinfection, which suggests that a positive rapid viral test alone may not be sufficient to rule out treatment with antibiotics.

Bocavirus and Respiratory Illness

Human bocavirus DNA was identified in 82 (5.6%) of 1,474 nasal specimens from children with upper and lower respiratory tract infections collected over a 20-month period in a San Diego children's hospital.

The prevalence of the human bocavirus (HBoV) infections peaked at 14% between March and May in both 2004 and 2005, although the reason for the spring peak was unclear, reported Dr. John C. Arnold of Children's Hospital, San Diego, and his colleagues. The study included children up to age 18 years, but most (63%) were less than 1 year old (Clin. Infect. Dis. 2006;43:283-8).

The researchers reviewed the records of 68 (83%) of the 82 patients with HBoV to discover the clinical characteristics associated with the infection in children. They found underlying illnesses in 21 (31%) children including 11 patients with asthma and 7 patients with neuromuscular disorders.

Cough was the most common symptom, based on data from 54 patients with no obvious coinfections or detectable viral antigens. Cough occurred in 46 (85%) of these children, and 10 (19%) had coughs described as "paroxysmal." A total of 33 patients (62%) showed clinical signs of lower respiratory tract infections, and bronchiolitis was the most common diagnosis (26%). Difficulty breathing, nasal congestion, fever, and diarrhea were also common in patients with HBoV, and five patients had a rash.

—Heidi Splete