

Dexamethasone Is Protective in Bacterial Meningitis

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CHICAGO — Dexamethasone treatment can reduce the sequelae of pediatric bacterial meningitis when given prior to or concurrent with antibiotic therapy, according to Dr. Marianne Gausche-Hill.

"Although this issue has been controversial in the past, I think we are on the pro side now," she said at a meeting sponsored by the American College of Emergency Physicians.

The goal of corticosteroid therapy is to reduce the inflammatory response that



In a recent study, steroids before or with antibiotics was associated with protection from death or severe morbidity.

DR. GAUSCHE-HILL

can lead to thrombotic changes, vasculitis, increases in cerebral pressure, and neuronal injury, she said.

"Reducing inflammation is the key to preventing sequelae," she said. "Obviously, antibiotics are important, but early reduction of inflammation is essential—especially in reducing the risk of hearing loss."

Until recently, there was some controversy about whether corticosteroid therapy was appropriate for pneumococcal meningitis because some studies suggested it might impair the cerebrospinal uptake of vancomycin, said Dr. Gausche-Hill, who is director of emergency medical services and pediatric emergency medicine fellowships at Harbor-UCLA Medical Center and professor of medicine at the University of California, Los Angeles.

Both the Infectious Diseases Society of America and the American Academy of Pediatrics Committee on Infectious Diseases

previously released cautionary statements about the use of steroid therapy in pediatric pneumococcal meningitis, she said.

But a more recent study showing significantly improved outcomes with adjuvant corticosteroid therapy in pneumococcal meningitis (*Arch. Dis. Child.* 2005;90:391-3) has shifted medical opinion in favor of this therapy for both *Haemophilus influenzae* and pneumococcal meningitis, she said.

The study of 120 cases of pediatric pneumococcal meningitis included 15 chil-

dren who died and 39 who sustained permanent neurologic impairment from the infection. Corticosteroid therapy either before or with parenteral antibiotics was associated with protection from death or severe morbidity (odds ratio of 0.21), Dr. Gausche-Hill said.

She suggested the algorithm for children with suspected bacterial meningitis should be an immediate lumbar puncture (if not contraindicated) and blood cultures, followed by dexamethasone and

empiric antibiotic therapy.

In treating adolescents, she said, consideration of the adult literature is helpful. Although many authors recommend dexamethasone and antibiotics for all forms of adult bacterial meningitis, the Infectious Diseases Society of America recommends dexamethasone for pneumococcal disease only—noting inadequate data to recommend this therapy for other forms of bacterial meningitis, such as meningococcal disease, Dr. Gausche-Hill said. ■

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x-rays were available. Dr. Kesebir cited peribronchial cuffing, infiltrates, and hyperinflation.

Of particular interest were eight children who presented with gastrointestinal symptoms. Dr. Kesebir and her colleagues concluded that HBOV is associated with upper and lower respiratory tract disease in children, and speculated that it also may be the cause of gastrointestinal symptoms.

Among the future studies planned are screening of children up to age 5 for HBOV, DFA screening of positive specimens for coinfection with other viruses, and a search for the cause of gastrointestinal symptoms.

In the interview, Dr. Kesebir said the researchers do not know whether the virus jumped species or just had not been detected in humans before. "It is in adults as well, but most of the findings of symptoms are in children. ... Probably the adults are carriers and less symptomatic or immune," she said. ■



Please see brief summary for PEDIARIX on the following page.

References: 1. Centers for Disease Control and Prevention. National, state, and urban area vaccination coverage among children aged 19–35 months—United States, 2003. *MMWR*. 2004;53(29):658–661.

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