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Medline ® Abstracts for References 7,8
of 'Fever without a source in children 3 to 36 months of age'

7

TI Risk factors for development of bacterial meningitis among children with occult bacteremia.

AU Shapiro ED, Aaron NH, Wald ER, Chiponis D

SO J Pediatr. 1986;109(1):15.

To identify risk factors for the development of bacterial meningitis, we compared clinical characteristics in children with occult bacteremia who did and those who did not subsequently develop bacterial meningitis. The estimates of risk were adjusted for the possible confounding effects of other characteristics by using logistic regression. Of 310 children (median age 15 months) who had occult bacteremia with *Streptococcus pneumoniae*, *Haemophilus influenzae* type b, or *Neisseria meningitidis* at either Yale-New Haven Hospital or Children's Hospital of Pittsburgh, bacterial meningitis subsequently developed in 22 (7%). Compared with the risk associated with occult bacteremia with *S. pneumoniae*, the adjusted relative risk for bacterial meningitis was 85.6 (P less than 0.0001) and 12.0 (P = 0.0001) for *N. meningitidis* and *H. influenzae* type b, respectively. By contrast, the adjusted relative risk associated with a lumbar puncture at the initial visit was only 1.2 (P = 0.78). The development of bacterial meningitis in children with occult bacteremia is strongly associated with the species of bacteria that causes the infection, but not with a lumbar puncture or with other clinical characteristics identifiable at the initial visit.

AD

PMID8088242

8

TI Effect of antibiotic therapy and etiologic microorganism on the risk of bacterial meningitis in children with occult bacteremia.

AU Baraff LJ, Oslund S, Prather M

SO Pediatrics. 1993;92(1):140.

OBJECTIVE: To quantify the effect of antibiotic therapy on the probability of subsequent bacterial meningitis in children with fever without source treated as outpatients.

DESIGN: Bayesian meta-analyses. **REPORTS INCLUDED:** All reports of the organism-specific prevalence of occult bacteremia in children with fever without source treated as outpatients, and the organism-specific prevalence of subsequent meningitis in children with occult bacteremia initially treated as outpatients stratified by type of antibiotic therapy.

RESULTS: The mean probabilities of subsequent meningitis in children with occult bacteremia were 9.8%, 8.2%, and 0.3% in the no antibiotic, oral antibiotic, and parenteral antibiotic therapy groups, respectively. All cases of bacterial meningitis in children with occult bacteremia treated with oral antibiotics were due to *Haemophilus influenzae*. There were no cases of culture-positive bacterial meningitis in 139 bacteremic children treated with ceftriaxone (mean probability, 0.3%; 95% confidence interval, 0.0% to 1.5%). The mean probabilities of bacterial meningitis in a child with fever without source treated as an outpatient without antibiotics were: *Streptococcus pneumoniae*, 0.21%; and *H. influenzae*, 0.06%.

CONCLUSIONS: Antibiotic therapy is effective in preventing meningitis in children at risk of occult bacteremia.

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