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National Study of the Effect of Antimicrobial Prophylaxis Upon Eradication of Hemophilus Influenza Type B Carriage and the Prevention of Secondary Cases of Invasive Hemophilus Influenza Type B Disease

The Section of Communicable Disease Control has agreed to help the Center for Disease Control's Alaska Investigation Unit as part of a national study on the effectiveness of antimicrobial prophylaxis of Hemophilus influenzae type b and the prevention of secondary cases due to this organism. Hemophilus influenzae type b is the leading cause of bacterial meningitis in the U.S.. Additionally, serious invasive forms of H. influenzae type b disease such as pneumonia, epiglottitis, and septic arthritis are common. However, unlike other common bacterial causes of serious disease (meningococcal and pneumococcal) the majority of H. influenzae type b disease occurs in children less than 6 years of age and most in children less than 2 years of age. A recently published prospective national study of secondary spread of H. influenzae type b in household contacts found the risk of H. influenzae disease in household contacts under 6 years of age was similar to the risk of secondary meningococcal disease in all household contacts. Thus a study was designed to test the effectiveness of antimicrobial prophylaxis against H. influenzae.

To measure the impact of antimicrobial prophylaxis in preventing secondary cases of invasive H. influenzae type b disease the study involves 2 prospective unblinded randomized trials among close contacts cases of invasive H. influenzae type disease. The study will focus on contacts of persons with recent invasive H. influenzae type b disease occurring in an individual attending a day/care center or nursery school or in a child admitted to a hospital who has a household contact less than 6 years old. The drug being tested is rifampin given in two different regimens: rifampin 10 mg/kg/day (not to exceed 600 mg/day) x 4 days (infants less than 1 month of age get ½ this dose) and rifampin 20 mg/kg/day divided into 2 doses (not to exceed 600 mg/day) x 2 days (infants less than 1 month of age get ½ this dose). The study is to begin November 1, 1979 and continue for 1 year.

Hospitals statewide are being contacted and asked to report H. influenzae type b isolates. Similarly any report of invasive H. influenzae disease can be made directly to this office (272-7534 or via the Rapid Telephonic Reporting System by dialing Zenith 1700). And - remember that bacterial meningitis is a reportable disease!

One note of caution - although there appears to be a significant risk of secondary cases in children less than 6 years of age, no evidence is yet available that indicates any antimicrobial prophylaxis is effective in preventing secondary cases in this age group. For this reason we cannot recommend specific prophylaxis. Hopefully, the CDC's study will solve this problem.