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Hemophilus Influenza Type B Sensitivity in Alaska

As you know (see Bulletin No. 20, November 1979) this office is helping the Alaska Investigations Division of the Centers for Disease Control, Atlanta, conduct a national study to test rifampin as prophylaxis against secondary H. influenza disease. This is being done since a prospective national study found that there is significant increased risk of secondary cases in household contacts less than six years of age (1).

An interesting spin-off of this current study is the estimated prevalence of ampicillin-resistant H. influenza in Alaska. To do this Dr. Milton Lum of the CDC, Alaska Investigation Division contacted all hospitals in the state and requested the number of positive blood or CSF H. influenza isolates and their sensitivities from children between January, 1977, and September, 1979. One hundred thirty isolates were reported from 11 hospitals. Kirby-Bauer disc sensitivities to ampicillin and chloramphenicol were available on 88 and 89 isolates respectively. Seventy-one (79.7%) of the isolates were sensitive to ampicillin so that the estimated prevalence of ampicillin-resistant H. influenza in Alaska during this time was 20.3%. All 89 isolates tested for chloramphenicol sensitivity were sensitive.

The 20.3% prevalence of ampicillin-resistance is much higher than recent U.S. estimates. For example a survey between October, 1975, and October, 1976, by the CDC found an estimated prevalence of only 5% (2). Several factors including the known high incidence of serious H. influenza disease among Alaskan Natives, whether H. influenza serotyping is done or not, and the precision of sensitivity testing contribute to the apparent high prevalence in Alaska of ampicillin-resistant H. influenza. Chloramphenicol-resistant H. influenza has been occasionally reported in the U.S. but not to our knowledge in Alaska.

These findings lead us to remind everyone that current recommendations for antibiotic therapy for children with suspect and invasive H. influenza disease or purulent meningitis of unknown etiology is ampicillin **plus** chloramphenicol until the sensitivity of the organism is determined; and then the single appropriate antibiotic is continued (3, 4 & 5).

References

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4. Katz SI, Ampicillin-resistant Haemophilus influenza, Pediatrics 55:5-8, 1975.
5. Smith AL, Antibiotics and invasive Haemophilus influenza, N Engl J Med 294:329-1331, 1976.