373 EPIDEMIOLOGY OF β-LACTAMASE POSITIVE HEMOPHILUS INFLUENZAE TYPE B IN LOS ANGELES COUNTY. L.J. Baraff, G.D. Overturf, H.T. Wright, Jr., P.F. Wehrle. Los Angeles County/University of Southern California Medical Center, and Childrens Hospital of Los Angeles, Department of Pediatrics, Los Angeles.

Fifteen of 192 hospitals enrolled in the L.A. County Meningitis Surveillance Program were identified as caring for all patients with Hemophilus influenzae meningitis in the county in 1975. The prevalence of β-lactamase positive Hemophilus influenzae (βLPHI) was estimated by a survey of bacteriology records at these hospitals. Four of 217 (1.8%) Hemophilus influenzae meningitis patients had β-lactamase positive CSF isolates in 1975. An additional patient with mastoiditis, and CSF pleocytosis with a positive direct CSF Quelling for Hemophilus influenzae type B, but negative CSF culture, had βLPHI isolated from a middle ear aspirate. Seven other βLPHI were reported in 1975 including one from blood culture. These same hospitals reported 19 βLPHI in 1976 including five from CSF and two from blood. MICs of ampicillin for 13 CSF and blood isolates ranged from 1.6 to 200 ugm/ml with a mean of 58 ugm/ml. All strains tested were inhibited by ≤ 1.6 ugm/ml of chloramphenicol. All patients with positive CSF cultures for βLPHI were treated with chloramphenicol; 8/9 recovered without sequelae and one expired. Two patients with positive blood cultures for βLPHI, one each with septic arthritis and facial cellulitis, and the patient with CSF pleocytosis and mastoiditis, were treated with ampicillin or penicillin and made a full recovery.

374 EPIDEMIOLOGY OF NEONATAL MENINGITIS-LOS ANGELES COUNTY 1975. L.J. Baraff, P.F. Wehrle, J. Wilkins, L. Chan. Los Angeles County/University of Southern California Medical Center, Department of Pediatrics, Los Angeles.

One hundred ninety-two of 194 L.A. County hospitals were enrolled in the Meningitis Surveillance Program in 1975. Sixty-nine cases of neonatal meningitis were identified from bacteriology laboratory reports and medical records at each hospital. Criteria for case inclusion were age ≤56 days and a positive CSF culture or a CSF cell count >500 WBC with >50% PMNs, not related to CSF hemorrhage. Etiologic organisms included: Group B Strep, 28; Listeria, 9; Gram negative enterics, 9; Strep Not B, 6; Others, 6; and Purulent unknown, 11. The cumulative percent of cases by age was as follows: 0-7d, 36%; 0-14d, 57%; 0-28d, 80%; and 0-42d, 91%. Mean ages for the major pathogens were: Group B Strep, 18d; Listeria, 7d; and Enterics, 9d. The total incidence of neonatal meningitis was 63.7/100,000 live births. The incidence was significantly higher in Blacks (139.3) and Spanish surnamed (69.1) than in Caucasians (32.7). The incidence was highest in Blacks for all etiologic types except Enterics, in which it was highest in Spanish-surnamed. Prematurity was a significant predisposing factor, present in 25% of Blacks and Spanish-surnamed and 42% of Caucasians. Serious complications occurred in 16(23%) patients and included convulsions (13%), psychomotor retardation (10%), hydrocephalus (4%), and paresis (3%). Complications were significantly more frequent with Group B Strep (35%) than with other etiologic organisms (12%). Forty-three patients (62%) made a full recovery; ten (14%) died.

375 EPIDEMIOLOGY OF PEDIATRIC MENINGITIS-LOS ANGELES COUNTY 1975. L.J. Baraff, P.F. Wehrle, J. Wilkins, L. Chan. Los Angeles County/University of Southern California Medical Center, Department of Pediatrics, Los Angeles.

One hundred ninety-two of 194 L.A. County hospitals were enrolled in the Meningitis Surveillance Program in 1975. Three hundred twenty-eight cases of meningitis in children were identified from a review of bacteriology laboratory reports and medical records at each hospital. Criteria for inclusion of a case were age >56 days and <18 years; and a positive CSF culture, or CSF pleocytosis >500 WBC with >50% PMNs, or CSF pleocytosis >100 WBC with >50% PMNs with a positive blood culture for one of the major bacterial pathogens. Etiologic organisms included Hemophilus influenzae type B, 207; Streptococcus pneumoniae, 43; Neisseria meningitidis, 37; Others, 9; and Purulent unknown, 32. The cumulative risk of meningitis in the first five years of life was 2.6/1000 for all types and 1.8/1000 for Hemophilus influenzae. The incidence was significantly higher in Spanish-surnamed and Blacks than in Caucasians. The incidence was highest in Spanish-surnamed for all types except Others. Associated diagnoses included otitis media(22%), iron deficiency anemia(13%), mastoiditis(4%), sinusitis(1%), and skull fracture(1%). One case (S.pneumoniae) was associated with Sickle Cell Disease. Serious complications occurred in 69(21%) patients and included convulsions(21%), paresis(6%), sub-dural effusion(4%), deafness(3%), psychomotor retardation(3%), and hydrocephalus(2%). Complications and mortality were highest in the Neisseria group. Thirteen patients died (4%) and 297 (85%) made a full recovery.

376 BACTERIAL COLONIZATION OF INFANTS RAISED IN INCUBATORS AND UNDER RADIANT HEATERS. Chia T. Chang, Leonard Glass, Hugh E. Evans and Sophie H. Pierog. Jewish Hospital and Medical Center of Brooklyn, Department of Pediatrics, Brooklyn, New York.

The potential risk of infection among newborn infants raised under open radiant heaters (RH) is uncertain. In a prospective, controlled study, rates of bacterial colonization of the anterior nares, umbilicus and groin were determined during the first 3 days of life in 15 infants raised under RH and in 27 infants raised in Isolette incubators (I). None of the infants received systemic antibiotics during the study.

Decreased bacterial colonization was observed at all sites on each day of the study in the RH group. This was due to the almost complete absence of colonization with S. aureus in these infants. In contrast, colonization with S. aureus at the 3 sites ranged from 3.7 to 40.7% among the I infants. S. epidermidis, the most commonly encounted organism, was seen with comparable frequency in both groups. There was also no intergroup difference in the prevalence of E. coli and other enterobacteriaceae. Systemic and topical infections were not observed in either group.

These results suggest that RH inhibits colonization of the skin and nares with S. aureus, and may play a beneficial role in reducing the incidence of staphylococcal infection.

377 THE EFFECT OF BODY WEIGHT AND ITS CHANGES ON CHILDREN'S BLOOD PRESSURES. W. Clarke, H. Schrott, R. Lauer, University of Iowa, Iowa City, Iowa.

Obesity has been shown to be an important factor in hypertension of adults. The purpose of this study is to examine the relationships between blood pressures and measures of body size and obesity in the school age. In two school screens in 1971 and 1973, 6005 children were examined, of which 2872 were screened in both surveys. Height, weight, blood pressures and triceps skinfolds were obtained. Using deviations from regression, data were age/sex standardized. Systolic (SBP) and diastolic (DBP) blood pressures were correlated with weight (r=0.41 for SBP and 0.29 for DBP). Similar correlations were observed for height, skinfold and relative weight. Follow-up SBP was correlated with initial SBP (r=0.38), initial weight (r=0.32), and change in weight (r=0.24). A multiple regression equation based on initial SBP explained 14% of the variability in follow-up, while an equation based on initial SBP and weight and change in weight explained 22%. The other variables did not add to the prediction. Change in SBP was correlated with initial SBP (r=-0.51), and change in weight (r=0.17); 26% of the variability in the change in SBP over 2 years was explained by initial SBP alone, while 33% was explained by an equation based on initial SBP, weight and change in weight. Similar results were observed for diastolic blood pressure. These data show that significant portions of the change of blood pressures in children can be explained by relative changes in body weight.

378 PRIMARY E. AEROGENES BACTEREMIA IN PEDIATRIC PATIENTS. K. E. Edwards, J. R. Allen, M. J. Miller, R. Yogev, P. C. Hoffman, D. C. Mackel, R.L. Anderson A. T. Davis (Spon. by H. L. Nadler). Northwestern Univ.Med.Sch., Children's Memorial Hospital, Dept. of Pediatrics, Chicago and Bureau of Epidemiology, Center for Disease Control, Atlanta.

An epidemic of Enterobacter aerogenes sepsis occurred in seven patients within a four-day period in a large pediatric hospital. These patients had received solutions of D5W/0.2NS in 250 cc flexible plastic bags to which 2.5 cc (5meq) of KCl had been added in the hospital pharmacy. All seven patients developed fever and promptly defervesced with withdrawal of the suspect intravenous fluid and institution of appropriate antibiotics. In contrast to reports of epidemics in adults, no mortality occurred, phlebitis was rarely seen and the systemic signs of septicemia were less severe. E. aerogenes septicemia developed in 28% of the 25 children who received at least one unit of the suspect fluid. No cases occurred in children receiving other intravenous fluids. Three units of the suspect intravenous fluid being infused into patients and six of 178 used bags with KCl added were culture positive for E. aerogenes. Although the source of contamination could not be established, the hospital admixture program may have amplified the epidemic.