1116 Morbidity Patterns & Incidence of Non-Group B Streptococcus (NGBS), as a cause of Neonatal Sepsis in a University Hospital. A. Nagaraj, B.K.Rajegowda C. Rathnabhushanam, D.S. Gromisch and R. Lala

Spon. By (Edward Wasserman)New York Medical College, Dept. of Pediatrics, Lincoln Hospital, Bronx, NY. Group B Streptococcus is the major pathogen in neonatal infections. However, increasingly, reports of NGBS are now appearing in the literature. In a retrospective study from January 1978 through December 1982 there were 51 cases of proven sepsis among 17,400 live births. 72% of the infections were caused by Gram positive bacteria of which 92% were due to streptococci. Interestingly 20.5% of all streptococcal infections were due to NGBS (Total 7 cases). The perinatal features are shown in the table.

Case No.	Mat. Fever	PROM 12 hrs.	GEST in wks	B.W. in gms	Apgar Score 1&5	Age of Onset (hrs)	Type of Bacteria
1.	No	No	40	3490	9&10	24	Strep.viridans
2.	No	Yes	40	3402	9&10	33	Enterococcus
3.	No	No	39	2835	9&10	71	Strep.pneumoniae
4.	No	Yes	35	2183	9&10	10	Strep.pneumoniae
5.	Yes	Yes	40	3560	9&10	24	Strep.viridans
6.	No	No	40	3800	9&10	24	Strep.viridans
7.	No	No	40	3500	9&10	12	Strep.pneumoniae

It is of interest to note that these infections did not fit the usual early onset sepsis associated with GBS. NGBS disease seems to have an insiduous onset, mild symptoms of tachypnea, occasional grunting, poor feeding, abdominal distention, and no correlation with maternal risk factors. All infants were full term and responded well to antibiotics even in the presence of positive CSF cultures in two infants.

1117 CEFTRIAXONE (CTX) KINETICS AND CEREBROSPINAL FLUID (CSF) CONCENTRATIONS IN INFANTS AFTER LOADING (LD) AND MAINTENANCE DOSES (MD). Milap C. Nahata, Diane E. Durrell, William J. Barson, Ohio State University Colleges of Medicine and Pharmacy, Children's Hospital, Department of Pediatrics, Columbus, Ohio.

Thirteen infants (0.4-1.4 yrs) with meningitis were studied. CTX therapy consisted of a 75 mg/kg LD, followed by 50 mg/kg MD every 12 hrs IV over 10 minutes. Simultaneous blood and CSF samples were obtained in 11 infants at 11.5-12.8 hr after LD. In 3 of these, multiple blood samples were collected after the LD and after 9-10 days of MD; simultaneous blood and CSF samples were also collected at 1.25-5.75 hr at steady-state. CTX was measured by HPLC. Simultaneous serum and CSF concentration ranged from 10.5-40.3 and 1.8-8.0 µg/ml after the loading dose and 74-139 and 5.8-7.9 µg/ml at steady-state, respectively. After LD and at steady-state, CTX total clearance was 1.06±0.18 and 0.64±0.06 ml/min/kg ($P<0.05$), distribution volume was 0.33±0.06 and 0.26±0.06 L/kg and elimination half-life was 3.67±0.06 and 4.61±0.28 hr, respectively. A higher CTX clearance at higher dose may be partly due to concentration-dependent plasma protein binding of CTX reported in adults. Although the CSF/serum concentration was low, the CSF bactericidal titers exceeded 1:512 suggesting a great potential for CTX therapy of central nervous system infections due to susceptible organisms.

1118 STAPHYLOCOCCUS EPIDERMIDIS BACTEREMIA IN NEONATES: THE OCCURRENCE OF FOCAL INFECTION. Gary J. Noel and Paul J. Edelson, Cornell University Medical College-The New York Hospital, New York, New York

The frequency and clinical significance of Staphylococcus epidermidis isolates from blood cultures of neonates collected over a 17 month period in The New York Hospital neonatal intensive care unit (NICU) were reviewed. Twenty-three episodes of clinically significant S. epidermidis bacteremia were identified using the criteria of isolation from 3 of 3 blood culture bottles from a single culture (6 episodes), or isolation from two or more blood cultures taken at different times (9 episodes), or simultaneous isolation from blood and fluid, pus, or vascular catheter (8 episodes). Of these 23 episodes, 10 were associated with colonized vascular catheters and four occurred in infants with necrotizing enterocolitis. Focal S. epidermidis infection occurred in 10 episodes and persistent bacteremia occurred in 7 of these episodes. S. epidermidis was the most frequent cause of bacteremia occurring in 1.2% of the neonates admitted to the NICU during the period reviewed. As assessed by disc method, 74% of the isolates determined to be clinically significant were resistant to methicillin and cephalothin and 91% were resistant to gentamicin. All isolates were sensitive to vancomycin. In addition to removing vascular catheters suspected of being colonized and searching for potential sites of focal infection, an antibiotic regimen which includes vancomycin should be initiated once clinically significant S. epidermidis bacteremia has been recognized.

1119 EXPERIENCE WITH ORAL ACYCLOVIR (ACV) IN CHILDREN. V.M. Novelli, W.C. Marshall, G.D. McKendrick, J. Yeo. (Spon. by Stuart Starr). The Children's Hosp. of Philadelphia, Infectious Disease Division, Pa., Hosp. for Sick Children, Infectious Disease Unit, London, and Wellcome Research Laboratories, Beckenham, Kent, U.K.

ACV, given intravenously, is effective in the treatment of herpesvirus infections in immunocompromised children. However, there are few data on the use and subsequent absorption of oral ACV. We have used oral ACV (600mg/m^2/dose) given six hourly for ten days, to treat 12 children aged 6 weeks-14 years suffering from varicella-zoster (VZV) or herpes simplex virus (HSV) infections. All patients were at risk for disseminated disease (leukemia 4, eczema 2, cystic fibrosis 2, neuroblastoma 1, immunodeficiency 1, nephrotic 1, young infant 1). Plasma ACV levels (obtained on day 3 or 4) were compared when the drug was taken fasting and with food. Sampling was carried out prior to the morning dose (trough) and then after 1 1/2 hours (peak). Levels were repeated similarly in the evening, when the drug was given with the main meal. Plasma levels (peak) were considerably higher than ED^{50} for HSV (0.1-1.5µM) and VZV (3.75µM). The drug was well tolerated and its absorption was not significantly affected when taken with food. All patients recovered without disseminated disease. There was no evidence of renal hepatic or hematological side-effects.

(n=12)	*Acyclovir levels (mean ± sem) Fasting	With Food	p
Trough	3.68±0.6µM	3.86±0.54µM	N.S.
Peak	8.02±0.92µM	7.74±0.61µM	N.S.

*determined by radioimmunoassay

1120 A PROSPECTIVE STUDY OF THE INFECTIOUS COMPLICATIONS OF BROVIAC CATHETERS IN ONCOLOGY PATIENTS. Thomas A. Olson, Martha C. Lupo, Victor F. Garcia and Gerald W. Fischer, Walter Reed Army Medical Center, Washington, DC and the Uniformed Services University of the Health Sciences, Bethesda,MD

Prolonged chemotherapy in oncology patients has been facilitated by permanent indwelling central venous catheters. This study prospectively evaluated infectious complications associated with Broviac catheters in children with malignancies. Catheters in infected patients were not removed unless antimicrobials failed to eradicate the infection. From June 1981 to September 1983, 21 oncology patients (ages 2 months to 14 years) had Broviac catheters placed and maintained at this hospital. There were 660 weeks of indwelling catheter time and single catheters have been maintained for up to 78 weeks. A total of 74 febrile episodes occurred in 20/21 patients. Bacteremia was detected in 9/74 (11%) febrile episodes. No patient with a positive blood culture required catheter removal or had a second bacteremia with the same organism. The organisms included S. epidermidis (4), S. aureus (1), Micrococcus (1), and K. pneumonia (2). The rate of catheter associated sepsis was one bacteremia for every 83 weeks of catheter time. Local infections near the catheter occurred in 3/21 patients and none were associated with bacteremia. Broviac catheters are valuable aids in management of oncology patients. Although these children are at high risk, serious infections were not a major problem. In addition, this data suggests that septic patients with Broviac catheters do not need to have their catheters routinely removed for effective therapy of bacterial sepsis.

●**1121** RISK OF SECONDARY HAEMOPHILUS INFLUENZAE TYPE B (Hib) DISEASE IN DAY CARE. Michael T. Osterholm, Joel N. Kuritsky, Lynne N. Pierson, Therese A. Libby, Richard A. Kaslow and Dan M. Granoff, MN Dept Health (MDH), Minneapolis; NIAID, Bethesda; and Washington Univ Sch of Medicine, St. Louis.

In 1982, the MDH initiated a statewide, prospective, active surveillance system for Hib disease. During the first year, we identified 219 cases among children <12 years of age. The median time of case report to MDH following onset of illness was 8.2 days. 80 cases (39%) occurred among children attending day care. Of 971 nonsibling-child day care contacts from the same room, 962 (99%) were followed for 60 days. 200 of the 962 (21%) received rifampin prophylaxis. No Hib cases occurred among this group or the 762 contact children who did not receive rifampin, including 137 <24 mos of age; and 269, 24 to 47 mos of age. The secondary attack rate for day care contacts <48 mos is lower ($p=0.003$) than that reported for household contacts of similar age in a national study. In the present study the distribution of outer membrane protein subtypes (OMP) was similar to that previously reported from 22 states. However, subtype 1H strains previously associated with an increased secondary attack rate in day care, were isolated more frequently from primary cases in day care than in non-day care (53% v. 32%, $p=0.03$). With the exception of day care, there was no relation between OMP subtypes and age, gender, onset of disease, or geographic residence of the case. Our data suggest that the risk of secondary Hib disease in day care is lower than that previously reported for family-sibling contacts. Further, the frequency of 1H strains among primary cases is higher than in non-day care population.