1056 *LACK OF BACITRACIN INHIBITION BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI.* *Janice Cockrell, Harry Dalton and Kathy Gardner, Departments of Pediatrics and Pathology, (Sponsored by Harold Maurer) Medical College of Virginia, Richmond, Virginia*

Sixty-four cultures obtained from Costa Rican children with acute pharyngitis were evaluated for the presence of Group A beta-hemolytic streptococci (GABHS) by the bacitracin inhibition test performed on primary plates. Of the thirty-three cultures showing beta-hemolysis, only two (9%) demonstrated bacitracin inhibition. The Directogen latex agglutination test was performed on mixed colonies from the 33 plates demonstrating beta-hemolysis. Of these, 12 (36%) were positive for GABHS, 19 were negative and 2 were uninterpretable. Of the 12 positives, 8 (24%) could be isolated and confirmed as Group A by the Phadebact Streptococcal Grouping Method. Four (12%) could not be isolated. These data suggest that there is a high rate of bacitracin resistance among GABHS in Costa Rica, and that the bacitracin disc inhibition test on primary plates should not be relied upon due to a lack of sensitivity inherent in the technique.

1057 COMPARATIVE TRIAL OF ANTIBIOTIC REMOVAL DEVICE AND CONVENTIONAL BLOOD CULTURE IN PEDIATRIC PATIENTS. Ellen Cooper, Martha Roe, Robert Wheeler, James Todd. C. Henry Kempe Center for Investigative Pediatrics; Depts. of Pathology and Pediatrics, The Children's Hospital; Depts. of Pediatrics and Microbiology/Immunology, the Univ. of Colorado School of Medicine, Denver, CO.

In patients with prior antimicrobial therapy recovery of microorganisms present in the blood is often delayed or prevented. Our clinical trial tested the usefulness of the Antibiotic Removal Device (ARD) in a pediatric population. Equal volumes of blood were inoculated in a sequentially randomized fashion into ARD and standard (STD) pediatric blood culture bottles. Each was independently processed and monitored by the early subculture technique. Clinical relevance of all isolates was independently determined by predefined criteria. Of a total of 966 cultures, 61 (6.3%) were positive.

	Earliest System Recovery			
Bacteremia:	Both Methods	ARD	STD	p
H. influenzae	9	7(3)*	5	N.S.
S. pneumoniae	2	0	6	0.04
Other organisms	13(2)	2	6(3)	N.S.
Possible Bacteremia	0	2(1)	1	N.S.
Contaminant	0	5(1)	3	N.S.

Although the ARD system may have been beneficial in the recovery of 3 Haemophilus influenzae strains susceptible to pretreatment antibiotics(*), there was no overall significant increase in bacterial isolation, and the recovery of S.pneumoniae from 6 patients (none on antibiotics) was actually significantly impaired.

1058 ROLE OF RESPIRATORY VIRUSES IN THE ETIOLOGY OF FEVER (F+) OCCURRING DURING CHEMOTHERAPY-INDUCED GRANULOCYOPENIA (G+). Deborah J. Cotton, Robert H. Yolken, John W. Hiemenz, James W. Hathorn, Doris J. Marshall, Janet S. Gress, Philip A. Pizzo, Pediatric Branch, NCI, NIH, Bethesda and Johns Hopkins Hospital Baltimore.

Nearly half of the fevers (>38.0°C) occurring during chemotherapy-induced G+ do not have a defined bacterial origin. We investigated whether respiratory viruses might account for some of these F+ episodes either as the primary cause of F+, as a co-infection, or an antecedent infection. During an 11 month period, throat washings obtained from 60 F+G+ adult and pediatric cancer patients were assayed for common respiratory viruses by enzyme-linked immunoassay. Positive viral washings were found in 25% of patients (15% influenza, 8% adenovirus, 2% parainfluenza). Patients with positive viral washings could not be distinguished on the basis of presenting symptoms, initial chest x-ray findings, height of initial F+, duration of F+, initial neutrophil count, or duration of G+. A bacterial infection was diagnosed in 15 of 44 patients with negative viral washings and 1 of 15 with positive viral washings. Respiratory viruses were not infrequently identified in patients with F+G+. Although the relatively small number of episodes studied precludes a definitive conclusion, respiratory virus infection does not appear to be implicated as an antecedent event for bacterial infection in F+G+ episodes and may be a primary cause of fever in this patient population. This study is continuing.

1059 PREVENTION OF ESCHERICHIA COLI K1 BACTEREMIA WITH TOPICAL MANNOSE IN NEWBORN MICE. Frederick Cox and Luann Taylor (Spon. by Alex F. Robertson), Medical College of Georgia, Dept. of Pediatrics, Augusta, Georgia.

An animal model of E. coli bacteremia after maternal-infant transmission was developed in newborn mice. Mid-gestation, E. coli free, Swiss-Webster mice were vaginally inoculated with $5X10^4$ E. coli strain LH (075:K1:H3). Blood cultures were obtained from newborn mice at 3 days of age and grown in TSB broth. Surface cultures of the nape and perineum were performed on McConkey agar. Prevention of bacteremia was studied using topical vaginal mannose (25 mg/ml) (M) and a sub-inhibitory dose of gentamicin (G) (.2 ug/ml). Inhibitors or saline (S) were applied vaginally with a micropippette after colonization.

Inhibitor	Time past inoculation	# positive/total tested (% bacteremia)	Range/5 litters (%)
S (controls)	2 hours	28/34 (82%)	77-89
Mannose	2 hours	15/61 (25%)	16-33
Gentamicin	2 hours	14/62 (25%)	15-27
M & G	2 hours	6/56 (11%)	0-16
Mannose	4 days	16/56 (29%)	20-33
M & G	4 days	15/64 (23%)	18-29

Surface colonization was present at 3 days of age in 38 of 51 (74%) control mice, 14 of 56 (25%) babies born to mannose treated mothers and 7 of 52 (13%) babies where mother and infant were treated.

Topical mannose may be useful in preventing colonization and/or disease from E. coli in human infants.

●1060 TRANSMISSION OF GIARDIA LAMBLIA FROM PUPPIES TO CHILDREN: SEROLOGICAL EVALUATION OF THE INFECTION. J Carl Craft*, Mananda S. Bhende. (Spon. by John E. Lewy) Dept. of Peds, Tulane Univ. School of Medicine, New Orleans, LA

During the last year three children developed symptomatic giardiasis after introduction of a puppy into the household. All of the 22 puppies in the three litters were positive for Giardia lamblia by CIE for Giardia fecal antigens and 77% by direct microscopic examination. Surveys of families acquiring puppies from the three litters demonstrated five asymptomatic children of 37 exposed and one adult of 53 exposed. The 8 children and one adult were positive for Giardia lamblia by CIE for Giardia fecal antigen and only one child was positive by direct microscopic examination. The Giardia lamblia obtained from the children and the puppies had similar precipitan patterns by CIE and Ouchterlony double-diffusion. Serum samples collected from the children 4 to 6 weeks after purchase of the puppies and discovery of infection, one month later and 5 months later were evaluated for anti-Giardia antibodies. The initial mean IgM titer was 1:256 followed by titers of 1:16 and 1:8 at 2 and 6 months respectively The initial mean IgG titer was 1:32 followed by titers of 1:128 at 2 and 6 months. All children and puppies responded to treatment (furazolidone 9 mg/kg/day for 10 days) for the giardiasis with clinical and fecal improvement. Two puppies relapsed two months after treatment but responded to a second course of therapy. The frequent interaction of puppies and small children makes this an important mechanism of transmission of Giardia lamblia with public health implications.

●1061 SIMPLE OBJECTIVE CRITERIA IDENTIFY INFANTS AT LOW RISK (LR) FOR BACTERIAL DISEASE (BD) AMONG INFANTS <3MO WITH SUSPECTED SEPSIS. Ron Dagan, Keith R.Powell, Caroline B. Hall, Marilyn A. Menegus. Univ Rochester, Medical Center Pediatrics and Microbiology, Rochester, New York.

Serious BD in febrile infants <3mo is difficult to exclude on clinical grounds. In most medical centers such infants are hospitalized and treated with broad spectrum antibiotics despite cost and iatrogenic risk. The purpose of this prospective study was to test the ability of simple, objective criteria to identify infants at LR for BD.

From 7/82-11/83 all previously healthy infants <3mo hospitalized for suspected sepsis were studied. Of 168 infants, 85% were <60 days old. Their mean temp. was 38.9°C. Laboratory evaluation included: CBC; U/A; LP; culture of blood, CSF and urine for bacteria; and viral cultures. An etiologic agent was identified for 120 (72% of the 168 infants).

There were 105 infants considered to be at LR for BD by the following criteria: 1) normal neonatal history; 2) no evidence of soft tissue, skeletal or ear infection; 3) normal CBC (WBC 5000-15,000/mm^3, <1500 bands/mm^3); 4) normal U/A. A group of 63 infants did not meet these critiera. The 2 groups did not differ in age or clinical presentation. None of the infants at LR had BD while 17 (27%) of 63 not meeting our criteria did ($p<.00001$). An infecting virus was identified in 70% of the infants at LR and in 59% of those not meeting our criteria ($p>.05$).

These findings suggest that simple, objective criteria can identify a large group of infants <3mo at low risk for BD for whom treatment with antibiotics might not be indicated.