1159 READMISSION OF THE NEWBORN WITH FEBRILE ILLNESS-PREDICTIVE VALUE OF FEVER, CBC AND PLATELET COUNTS. Peter R. Serrao, Houchang D. Modanlou, Newborn Division, Miller Children's Hospital, University of California, Irvine.

Fever and results of CBC, platelets, CSF and blood culture were evaluated in 90 newborns admitted from home with possible sepsis. One group (Group I-39 pts) had normal CBC, platelets and negative bacterial culture. A 2nd group (Group II-13 pts) had proven septicemia (positive blood and/or CSF culture) and a 3rd group (Group III-38 pts) had clinical evidence of infection (bacterial or viral) but had negative bacterial culture. Mean BW, GA and age at readmission were similar between the groups. Fever was significantly higher in Group II compared to Group I (101.2±1.7 vs 100.0±1.0, $p<0.05$) but not different from Group III.

	GROUP I*	GROUP II*	GROUP III*	P
BW(gms)	3290±887	3096±735	3507±637	NS
GA(wks)	38.6±2.9	38.6±2.1	39.6±2.7	NS
AGE/ADM(d)	18.9±18	21.5±19	16.9±9	NS
WBC	12,710±12,334	14,454±9,338	13,600±6,829	NS
BANDS	633±818	2580±1607	2221±2775	<0.01++
I/T	0.12±0.08	0.36±0.22	0.31±0.26	<0.001++
PLATELETS	345,882±155,502	379,077±177,384	429,200±180,174	NS

*: Mean ± 1 S.D.; ++: Groups II and III vs Group I.

The absolute band counts and I/T ratio did not distinguish Groups II and III. Initial fever of ≥101°F with elevated bands and I/T are sensitive indicators of serious neonatal infection warranting hospitalization. Conversely, infants without high fever and normal CBC can be managed without admission to the hospital.

1160 AN IN VITRO MODEL FOR ASSESSING ANTIMICROBIAL ACTIVITY DURING PERITONEAL DIALYSIS. Itamar Shalit, David F. Welch, and Melvin I. Marks. University of Oklahoma Health Sciences Center, Department of Pediatrics, Oklahoma City.

An in vitro model was designed for evaluating various parameters of infection and antimicrobial therapy during peritoneal dialysis (PD). The system includes a dialysis membrane sack containing commercially prepared dialysis fluid (DF) suspended in pooled human plasma, enclosed in a cylindrical flask. Ports through a rubber stopper were devised for bacterial inoculation, drug injection, and sample collection. By 6 hrs the simulated dialysis achieved pH, osmolarity, glucose, Mg^{++} and Ca^{++} values comparable to those of recovered peritoneal fluid (RPF) from patients undergoing PD. When antimicrobials (tobramycin [TOB] 8 µg/ml, piperacillin [PIP] 200 µg/ml, ceftazidime [CTZ] 100 µg/ml, or ciprofloxacin [CIP] 2 µg/ml) were added to the DF within the dialysis membrane sack, 75% of PIP and CTZ and 50% of TOB and CIP diffused into the surrounding plasma by 6 hrs. This is comparable to clinical experience with i.p. TOB or β-lactams. The bactericidal rate of the above drugs against 10^5 cfu/ml of P. aeruginosa was measured in DF during 6 hrs dialysis and was similar to killing kinetics in RPF from patients (no kill by PIP, <99% kill by CTZ, ≥99.9% kill by TOB and CIP). Maintaining CIP concentrations of 2 µg/ml in DF yielded ≥99.9% kill of E. coli, K. pneumoniae, S. epidermidis, and S. aureus within 2 hrs. This in vitro model may be useful in studying the kinetics of antimicrobial activity and designing studies of antimicrobial therapy for PD-related peritonitis.

†**1161** CHLAMYDIA-ASSOCIATED LOWER RESPIRATORY TRACT INFECTIONS (LRI) IN CHILDREN OVER 1 YEAR OF AGE. Ziad M Shehab, C George Ray, Linda L Minnich, Anne L Wright, Lynn M Taussig & GHMA Pediatricians, Arizona HSC, Depts of Peds, Path & Division of Respiratory Sciences, Tucson.

Chlamydia trachomatis (Ct) is believed to be a cause of LRIs mainly in young infants. Close surveillance for LRIs was maintained since birth on a group of 1182 children. Over a period of 17 months, we obtained nasopharyngeal and throat swabs for acute LRI from 340 children. All specimens were cultured for viruses, Ct and Mycoplasma pneumoniae. One or more of these agents were isolated from 67% of LRIs. Ct was isolated from 3/52 (5.8%) of infants ≤6 months of age, 0/61 (0%) infants 7-12 months and 9/227 (4.0%) children 1-3 years with LRI. Infection with Ct in these 9 older children (ages 17-34 mos, med=21 mos) occured from December to April and was associated with a variety of syndromes and with concurrent isolation of other pathogens.

	Ct alone	Ct + other agents
Bronchitis	3	1 (Influenza A virus)
Bronchiolitis	0	1 (Respiratory syncytial virus)
Croup	2	2 (Mycoplasma pneumoniae)
	5	4

Symptoms and signs included cough (9), rhinitis (8), fever (3), abnormal bronchial breath sounds (3), hoarseness (2), shortness of breath (2), stridor (2) and wheezing (1).

These results suggest that Ct is associated with a diversity of LRIs in children >1 year of age, and may often be present with other pathogens.

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●**1162** NEUTROPHIL AND MACROPHAGE RESPONSES ELICITED BY MONOCLONAL ANTIBODIES AGAINST GROUP B STREPTOCOCCI. Ann O. Shigeoka, Mark E. Weber, Seth H. Pincus, David G. Pritchard and Harry R. Hill. University of Utah School of Medicine, Salt Lake City, and University of Alabama at Birmingham.

Previously we showed that type specific monoclonal antibodies of IgM and IgG2a isotypes protect against intraperitoneal(IP) infection with type III group B streptococci(GBS) in neonatal rats. In contrast, monoclonal IgA does not protect against IP GBS infection. The present study was designed to evaluate mobilization of neutrophils(PMN) and macrophages(MØ) in GBS infected neonatal rats. Rats were infected IP with 10^6 GBS and given buffered saline or type specific IgG, IgM or IgA. Peritoneal lavage and peripheral blood counts were obtained 0,4,8,12 and 20hrs postinfection. Significantly enhanced PMN responses were seen in IgG and IgM treated rats(4hr-IgG $\bar{x}$=38997, IgM 31957, IgA 17981; 8hr-IgG 84127, IgM 57008, IgA 43243, untreated 38120). Peritoneal MØ increased only slightly in IgG or IgM treated rats(NSD). By 20hrs peritoneal PMN in IgG or IgM treated rats actually decreased (IgG 35258; IgM 29538, untreated 46004) as GBS were cleared from blood and peritoneal cavity (GBS culture$^+$ rats-IgG 3/8; IgM 1/6; untreated 6/6). Mobilization was also evaluated using GBS infected polyvinal sponges implanted subcutaneously. Cell recovery from sponges was significantly greater in IgG or IgM treated rats (20 hrs-GBS alone $\bar{x}$=300 PMN/2450 MØ; IgM 1950/3250; IgG 700/3600; IgA 0/2000). These results suggest that antibody protection is mediated in part by enhanced PMN mobilization to the site of infection. This local PMN response may be essential for protection of human neonates from GBS infection.

●**1163** BIOLOGY AND THERAPY OF ACUTE OTITIS MEDIA (AOM) CAUSED BY BRANHAMELLA CATARRHALIS (Bc). PA Shurin, CD Marchant, G Van Hare, N Cartelli, CE Johnson, D Fulton, CH Kim, Case Western Reserve University, Cleveland Metropolitan Gen. Hosp., Dept. of Peds., Cleveland, Ohio

Since 1980 we have observed an epidemic of AOM caused by Bc; 75% of strains produce beta-lactamase (BL+). To determine clinical significance of this infection, we studied pharyngeal colonization, clinical presentation and outcome of therapy.

Bc was present in MEE of 61/355 children enrolled in randomized, prospective clinical trials (17%); the proportion has not changed since 1980. Bc was present in pure culture in 40/61 (66%) and as a mixed infection with S. pneumoniae or H. influenzae in 21 (34%). AOM caused by Bc was less common in spring/summer 112/110 (11%) than in fall/winter 49/245 (20%) ($p < .05$). Colonization with Bc was also less common in summer (6/56)(11%) than winter (36/71) (50%) ($p < .01$).

Persistent MEE was present 2 wk. after Bc infection in 83% and at 4 wk. in 63%; the proportions were not significantly different in other etiologic groups. Culture of MEE was performed routinely during therapy. Failure to sterilize Bc-infected MEE was seen with Amoxicillin/Bacampicillin - 3/11 patients; Cefaclor - 2/19; Trimethoprim-sulfamethoxazole - 0/10; Augmentin - 0/9. All failures were with BL+ stains.

AOM caused by Bc occurs when respiratory colonization rates are high. Therapy with some drugs may not give prompt sterilization of MEE. In otherwise healthy children Bc lacks invasive potential; changes in routine prescribing may not be needed even when infection with BL+ Bc is frequent.

1164 EFFICACY OF RIBAVIRIN FOR TREATING RESPIRATORY SYNCYTIAL VIRUS (RSV) PNEUMONIA IN HIGH-RISK INFANTS. Margaret Spinelli, Kira Geraci-Ciardullo, Paul E. Palumbo, Oscar Laskin, and Paul J. Edelson. Departments of Pediatrics and Medicine, Cornell Univ. Medical College-New York Hospital, New York.

Twenty-two infants under 1 year hospitalized with lower respiratory tract disease due to RSV documented by virus isolation or indirect immunofluorescence were enrolled in a double blind placebo controlled efficacy trial of aerosolized Ribavirin. Nine patients with ten episodes of illness were classified as high-risk because of preexisting cardiac or pulmonary disease. The majority of patients in both groups presented with respiratory distress or apnea. All four patients in the treated group had bronchopulmonary dysplasia (BPD). In the placebo group, three patients had BPD and three had cardiac disease. Drug efficacy was assessed by comparing the mean duration of the following clinical characteristics between groups: tachypnea (RR > 50), days held NPO, days of hypoxemia (pO2 < 70), days requiring supplemental oxygen, and days requiring mechanical ventilation. Although trends in favor of Ribavirin were seen for all measures other than tachypnea, using the Wilcoxon rank-sum test, significant differences were seen for the two latter characteristics (2.2 days vs. 8.0 days, and 0.2 days vs. 4.5 days).