1081 BACTERIOPHAGE ARE PRESENT IN THE SPUTUM OF PATIENTS WITH BRONCHOPULMONARY Ps. AERUGINOSA INFECTIONS. Carmen Steinfort (Spon. by J. Michaelhouse) GBR/INTAMO, Bethesda, Maryland 20025 
Although it is generally appreciated that Ps. aeruginosa specific phage can be isolated from natural sources in which Ps. aeruginosa can be found, such as seawater and sewage, the presence of phage at the sites of Pseudomonas infection in man is not widely recognized. Using routine bacteriological procedures we show that species-specific phage can be consistently recovered from the sputum of patients with chronic Ps. aeruginosa bronchopulmonary infections, including 6 patients with cystic fibrosis and one non CF individual. Ps. aeruginosa specific phage was present in sputum at concentrations ranging between 10^7 to 10^10 viable particles/mL with as many as 4 different phage strains recovered from a single individual. Of the 16 phage isolates, at least 12 different phage strains could be identified based on bacterial host sensitivity and electron microscopic morphology. It would appear that Ps. aeruginosa and its phage commonly coexist at the site of human bronchopulmonary infections, and most probably at all sites of Ps. aeruginosa infection, and should be considered as possible factors influencing the pathogenicity of Ps. aeruginosa.

1082 EFFECTS OF PERSISTENT MIDDLE EAR EFFUSION (PME) ON DEVELOPMENT OF SPEECH AND LANGUAGE (SAL). David W. Teale, Jerome O. Klein, Bernard Rosner and Yehuda Shalev, Greater Boston Otitis Media Project, Boston Univ. School of Medicine, Dept. of Pediatrics, Boston City Hospital and Harvard Medical School, New England Research Laboratory, Boston.

To determine effects of PME occurring during the first 3 yrs. of life, we administered tests of S&L to 218 3 y.o., white, English-speaking children with normal developmental histories. All had been followed prospectively since birth; we stratified according to duration of PME, sex, type of health-care, and socio-economic status (SES). Below are selected results for children with PME (130+ days) and those without PME (120 days) in a suburban, private practice (I) and an urban clinic (II).

| Test | I 130+ < 30 | P | II 130+ < 30 | P |
|------|-------------|---|-------------|---|
| PPVT | 106 | 113 | 0.18 | 95 | 116 | NS |
| PSLS-AC | 121 | 135 | 0.004 | 116 | 115 | NS |
| PSLS-VA | 113 | 130 | 0.006 | 115 | 115 | NS |

PPVT = Peabody Picture Vocabulary Test  
PSLS = Pre-School Language Scale  
AC = Auditory Comprehension  
VA = Verbal Ability

These data suggest that PME early in life is associated with significant impairment of SAL; children from higher SES appear to be more affected.

1083 DIFFUSION OF MOXALACTAM INTO CSF OF CHILDREN WITH BACTERIAL MENINGITIS. M.C. Thirumoorthi, Joyce A. Buckley, Ralph R. Kaufman and Adam D. Dajani, Wayne State University and Children’s Hospital, Department of Pediatrics, Detroit.

Moxalactam (MOX), a new one-active lactam antibiotic, is active against an expanded spectrum of gram negative organisms including Haemophilus influenzae. It has also been reported to diffuse into cerebrospinal fluid. We administered IV MOX to children (6 wks-4 yrs) receiving conventional antimicrobial therapy for bacterial meningitis. Plasma and CSF specimens were collected 2 to 3 hours after a dose and assayed for MOX concentration by HPLC (capable of detecting 1 µg/mL of MOX). Eight patients received single doses of 15 or 25 mg/kg. In 11 determinations the plasma levels ranged between 2.7 and 24.9 µg/mL, but MOX was detectable in the CSF in only one instance. Eight patients received 50 mg/kg of MOX every 8 hours for 3 doses, and in 5 patients the drug diffused into CSF. MOX was detectable in 3/5 of CSF specimens early in the course of illness (2nd or 3rd day) and averaged 15.78 µg/mL (90% of plasma concentration). There was no correlation between the diffusion of MOX into CSF and the CSF white cell count, however MOX diffused to a greater extent in more protein content. In summary, MOX diffuses into CSF but such diffusion is unpredictable. Caution must be exercised in using MOX alone in the treatment of meningitis.

1084 UNUSUAL LABORATORY FINDINGS IN ECOVIRUS-11 MENINGITIS. L. Murry Thompson, Margaret C. Fisher, Adalwin Castaneda, Michael J. Fischbein, Wayne N. Byrd, and Fishbein J. Flisser, Temple University School of Medicine, St. Christopher's Hospital for Children, Department of Pediatrics, Philadelphia, PA.

Ecovirus (ECOV) was isolated from the cerebrospinal fluid (CSF) of 22 children in a 1980 summer outbreak of meningitis. Seventeen (77%) were <6 mos old (2-7 mos), 54% had CSF cell counts >10^4/mm^3 and 23% >500/mm^3. A rare amino acid (VPA/Asp) substitution (P) in the major capsid protein may explain the pathogenicity of this virus. ECOV was isolated from serum of one child with meningitis. MOX alone was used in the treatment of meningitis. Plasma and CSF specimens were collected 50 to 75 min after a dose and assayed for MOX concentration by HPLC. MOX was detectable in the CSF (1.6-18.5 µg/mL) at 50 min after a dose and was detectable in the plasma (1.8-34.0 µg/mL) at 30 min after a dose.

1085 DIAGNOSIS AND TREATMENT OF PURULENT NASOPHARYNGITIS - A DOUBLE-BLIND, TWO-DIGEST TREATMENT. James Todd, Nancy Todd, James Damato, Warren Todd, C. Hennepin, Kempe Center for Investigative Pediatrics, The Children's Hospital of Wisconsin, Milwaukee.

Coronavirus-like particles (CVLP) are associated with gastrointestinal (GI) symptoms in infants, including nausea, vomiting, and diarrhea. We report an intensive care nursery (NICU) outbreak of GI symptoms in infants and suggest a possible pathologic relationship. There were, however, no significant differences between active drug and placebo treatment groups for change in nasal discharge, complications, apparent drug benefit, or change in nasal flora with active antibiotic treatment. Significantly (p<0.05) more side effects were attributed to the placebo group, and routine culture of nasopharyngeal discharge and were randomized to 4 treatment groups with antibiotic (A=cephalexin) or decongestant/antihistaminic (B) treatments. The E-11 and E-12 groups were comparable for age, sex, race, number of patients withdrawn from the study, days ill, fever >38.0 C, appearance of discharge, nasal crusting, and number of patients with postnasal drip. Children with E-11 and E-12 in a suburban, private practice (I) and an urban clinic (II).

| Test | I 130+ < 30 | P | II 130+ < 30 | P |
|------|-------------|---|-------------|---|
| PPVT | 106 | 113 | 0.18 | 95 | 116 | NS |
| PSLS-AC | 121 | 135 | 0.004 | 116 | 115 | NS |
| PSLS-VA | 113 | 130 | 0.006 | 115 | 115 | NS |

PPVT = Peabody Picture Vocabulary Test  
PSLS = Pre-School Language Scale  
AC = Auditory Comprehension  
VA = Verbal Ability

These data suggest that PME early in life is associated with significant impairment of SAL; children from higher SES appear to be more affected. However, we conclude that stool Coronavirus-like particles are associated with clinically significant GI disease in the newborn.