**1081**

**DIFFUSION OF MOXALACTAM INTO CSF OF CHILDREN WITH BACTERIAL MENINGITIS.** M.C. Thirumoorthi, Joyce A. Buckley, Ralph R. Kaufman and Adnan S. Dajani.

Wayne State University and Children's Hospital, Department of Pediatrics, Detroit.

Moxalactam (MOX), a new beta-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 yr) 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). Eight patients received single doses of 15 or 25 mg/kg. In 11 determinations the plasma levels ranged from 4.7 to 29.4 µg/ml but MOX was detectable in 3/5 specimens early in the course of illness (2nd or 3rd day) and averaged 20% (range 2.5 to 30%) 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 patients with higher CSF protein content. A summary, MOX diffuses into CSF but such diffusion is unpredictable. Caution must be exercised in using MOX alone in the treatment of meningitis.

**1082**

**Differential of Persistent Middle Ear Effusion (PME) on Development of Speech and Language (S&L).** David W. Teale, Jerome O. Klein, Bernard Kanemer and TH. Kempe Center for Investigative Pediatrics, The Children's Hospital; Fitzgerald Army Medical Center; Denver.

To determine effects of PMEE 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 PMEE, sex, type of health-care, and socio-economic status (SES). Below are selected results for children with PMEE (130+ days) and those without PMEE (400+ days).

In a suburban, private practice (I) and an urban clinic (II).

| Test | I 130+ | P | II 130+ | P |
|------|--------|---|---------|---|
| PPVT | 106    | 112 | 105     | 102 |
| PSL-AC | 121 | 135 | .004 | 116 |
| PSL-VA | 113 | 130 | .006 | 115 |

PPVT = Peabody Picture Vocabulary Test

PSL-AC = Pre-School Language Scale

AC = Auditory Comprehension

VA = Verbal Ability

These data suggest that PMEE early in life is associated with significant impairment of S&L children from higher SES appear at greater risk. This study does not show if such effects are permanent or transient.

**1083**

**CORONAVIRUS-LIKE PARTICLES AND NEONATAL GASTROINTESTINAL DISEASE.** Yvonne E. Vaughan, C. George May, Linda L. Munnich, Claire R. Payne, Donna J. Beck, Paula F. Low. University of Arizona, College of Medicine, Departments of Pediatrics and Pathology, Tucson, Arizona.

Coronavirus-like particles (CULP) are associated with gastrointestinal (GI) symptoms (sx) in mammals, including man. We report an intensive care nursery (NICU) outbreak of GI sx associated with CULP, identified by electron microscopy, in the stools of affected infants. Immune aggregation of stool CULP occurred with sera of CULP positive (+) infants only. Prevalence of stool CULP, ascertained by 8 NICU-wide surveys over 40 weeks, fell from 67% to less than 10%, paralleling prevalence changes in the community. Most infants surveyed were premature. Overall, 362 (67%) of 546 stool specimens examined were positive for CULP. Neonatal or intrapartum acquisition was suggested by the finding that 342 (11/312) of the CULP + infants were examined within 72 hours of birth. CULP + infants were more likely to have GI sx within 7 da of survey (p<.005), including water loss stools (p<.005), and the following sx persisting for more 2 days: gastric retention (p<.001), biliious gastric aspirates (p<.001), abdominal distention (p<.01) and gross or occult blood in the stool (p<.005). CULP + infants were more likely to have multiple sx and had fewer discharges.

We conclude that stool Coronavirus-like particles are associated with clinically significant GI disease in the newborn.