

**810** OBJECTIVE DIAGNOSIS OF OTITIS MEDIA (OM) IN EARLY INFANCY. CD Marchant, PA McMillan, PA Shurin, CE Johnson, VA Turczyk, DE Muddell, Case Western Reserve University, Cleveland Metropolitan General Hospital, Department of Pediatrics, Cleveland, Ohio.

Young infants with OM are at high risk for the development of prolonged middle ear effusion (MEE) and recurrent OM. Objective, non-invasive diagnostic methods are needed for this age group. We determined the diagnostic efficacy of ipsilateral acoustic reflexes (IAR) detected with a 1000Hz stimulus and susceptance (B) tympanograms (660Hz) (NEJM 296:412,1977). Seventy-two infants <4m. of age who presented at well child and illness visits were studied prospectively. Quantitative measures examined were: 1) peak B, 2) mean B between +300 and -400 mm H<sub>2</sub> and 3) IAR threshold in decibels (dbHL). These measures were compared to independent pneumatic otoscopic findings. Substantial agreement was achieved between independent otoscopists (Kappa = .73). Diagnoses were confirmed by tympanocentesis when clinically indicated.

	peak B	mean B	IAR
Criterion for Absence of MEE	> 0.2 mmho	> 0 mmho	< 100 dbHL
SENSITIVITY (56 ears with MEE)	91%	84%	86%
SPECIFICITY (76 ears no MEE)	86%	86%	89%

Peak B in normal ears was related to age: the mean peak was 0.41 mmho in 47 infants <2m. and 0.68 mmho in 21 infants 2m. to 4m. (p < .005). **Conclusions:** Infants less than 4m. of age: 1) Tympanogram peak susceptance and ipsilateral acoustic reflexes are accurate, objective, quantitative diagnostic methods. 2) Developmental changes in peak susceptance may have obscured the value of tympanograms in previous studies.

**811** A CONSULTATIVE PRACTICE IN PEDIATRIC INFECTIOUS DISEASES. Anthony Minnefor, James M. Oleske (Spon. by Franklin C. Behrle). St. Joseph's Hospital and Medical Center. Department of Pediatrics. Paterson, New Jersey. Little if any information is available concerning the spectrum of illness encountered during the day to day practice of pediatric infectious diseases. Poretz (J. Infect. Dis. 147:417-421, 1983) presented his experience with inpatient and outpatient consultations for a primarily adult population seen during part of 1982. We reviewed patient records for 1408 infants, children, and adolescents seen by one of us in inpatient infectious disease consultation during the period 01/01/81 to 12/01/83. Patients ranged in age from neonates through 21 years. Consultations were requested by pediatricians, family practitioners, internists, medical and surgical subspecialists and seen at one of nine institutions in northern New Jersey. Consultations were classified according to organ system involved, age and disease category. Several striking differences emerged when compared to Poretz's experience with adults. These include less post general surgical and gynecologic infections; bone and joint infections are problems in all age groups. In our study, neonates (by definition) dermatologic, gastrointestinal and respiratory tract infections were more prominent. This study has implications for undergraduate, graduate and post graduate education in infectious diseases. This experience has been used effectively to develop teaching sessions at involved institutions. Data on telephone inquiries from physicians will also be presented.

**812** PRENATAL ANTECEDENTS OF CHILD MALTREATMENT. John M. Pascoe (Spon. by Marshall Klaus). College of Human Medicine, Department of Pediatrics/Human Development, Michigan State University, East Lansing, MI.

Child maltreatment remains a major problem in the United States, the etiology of which is complicated by contributions from biological and social factors. To further clarify the antecedents of child maltreatment, 100 consecutive mothers seen in an urban community hospital obstetric clinic for indigent women (80% Medicaid) were studied to determine prenatal and perinatal biological and social factors related to a subsequent report to a department of social services (DSS) for suspected child maltreatment. Fourteen mothers from this study group were referred to DSS before their child was 24 months old. Of the 24 variables assessed, 7 were associated with referral to DSS. 1) Maternal smoking during pregnancy, 2) C-section, 3) NICU admission, and prenatal maternal feelings of: 4) inadequate daily task-sharing among family members, 5) dissatisfaction with visits from extended family, 6) dissatisfaction with male support, 7) dissatisfaction with other support figures. An index was constructed with each of these factors scored "1" when present and "0" when absent. Using this index 86% of mothers referred to DSS vs 43% of mothers not referred to DSS had scores > 3 (p < .01).

These data support the findings of previous work on the antecedents of child maltreatment. They emphasize the relationship between prenatal maternal dissatisfaction with support networks, perinatal biological difficulties and subsequent parent-child interaction problems.

**813** RESIDENTS' KNOWLEDGE OF BEHAVIORAL PEDIATRICS. S. Phillips, S. B. Friedman, B. H. Zebal, Dept Peds & Psych, Univ Md Sch Med, Baltimore

Performance on the Board of Pediatrics' In-Training Exam (7/81) and a 30-item addendum assessing behavioral knowledge was compared for four groups of programs, three of which were participating in a separate, formal evaluation of behavioral training. The groups were: 10 schools funded for mandatory behavioral training, 6 not funded but providing mandatory training, 4 comparison programs not requiring training but participating in the formal evaluation, and all other (221) schools whose residents took the exam. Three measures were calculated for each of 4,433 residents: % correct on "organic" items (exam items not related to behavior); % correct on the "behavioral" items in the addendum; and a ratio score (Behavior score/Organic score). For all three PL years, Organic and Behavioral scores were only moderately correlated (r = .16 - .52). No significant differences were found in Organic performance between the four groups. In contrast, Behavioral and Ratio scores yielded significant (and similar) effects: Ratio scores were higher for Funded residents in the PL-1 year than for any other PL-1 group. For PL-2s, Funded, Not Funded, and Comparison residents performed better than the All Other group. By the third year, Funded residents performed better than those in the All Other group (Not Funded and Comparison scores fell in between). These data suggest that: (1) behavioral knowledge is only moderately related to organic knowledge; (2) requiring behavioral training does not affect the level of organic knowledge; (3) Funded programs attract residents more knowledgeable about behavior who, during their training, maintain greater knowledge than residents not participating in a formal evaluation of behavioral training.

**814** PLACE OF BIRTH FOR VERY LOW BIRTHWEIGHT VLBW (1500 GRAMS) INFANTS: DOES IT MATTER? Tonse Raju, Ann Winegar, Steve Miller, Paul Peterson, William Spellacy, Dharmapuri Vidyasagar, Department of Pediatrics and Obstetrics, University of Illinois Medical Center, Chicago, Illinois.

To evaluate the effect of place of birth on the morbidity and mortality of VLBW infants, we analyzed data (320 variables from each mother-infant pair collected prospectively) from 25, 120 infants born in our Perinatal network of 3 Level III (L. III) and 9 Level II (L. II) hospitals over an 18 month period. 397 VLBW and 2145 low birth weight infants (<2500 gm, LBW) formed a subset. L. III hospitals have pediatric and OB residencies, and perinatal fellowship programmes; only 3/9 L. II hospitals have pediatric and OB residencies. **Results.** L. III centers cared for a greater fraction of mothers on public aid (45% Vs 29%, P<0.0001), and teenage mothers (<16 years, 5% Vs 2%, P<0.001). Total perinatal and neonatal mortality rates (PMR, NMR) were higher in L. III than in L. II (16.3 and 10.6 Vs 10.1 and 4.7) which was mainly due to a 150% and 268% higher VLBW and LBW rates. However, for VLBW infants born in L. III, 5 minute Apgar score distribution was significantly superior and PMR was better than for those born in L. II. (Table)

	Outcome of <1500 gm infants:					
*P<0.001	VLBW	Fetal	% Neo.	PMR	Apgar 0-3	Apgar 0-3
**P<0.05	Rate	Rate	Death	Death	at 1 min.	at 5 min.
Level II	7.1%*	0.91%*	24.3%	36%**	48%**	46%**
Level III	10.5%*	2.5%*	11.6%	31%	382	40%
						16%

These data indicate that for the high risk VLBW infants, availability of supportive services is crucial for good outcome; fetal transfer may be better than high risk neonatal transfer.

**815** CEREBROSPINAL FLUID MET-ENKEPHALIN IN SUDDEN INFANT DEATH SYNDROME. L. Rappaport, HPW Kozakewich, T. Fenton, F. Mandell, GF Vawter H.Y. Yang, The Children's Hospital, Harvard Medical School, Boston, MA. 02115, Laboratory of Pre-Clinical Pharmacology, NIH, Washington, D.C. 20032.

Impaired neuroregulatory responses are suspected to be crucial in Sudden Infant Death Syndrome (SIDS). It has been proposed that elevated endogenous opiates, generally respiratory depressants, might contribute to a vulnerability to SIDS.

We examined met-enkephalin levels in lumbar CSF obtained at autopsy in 35 infants with SIDS and 15 age matched controls dying of other causes. Samples were frozen at -80 C and analyzed by RIA for met-enkephalin like immunoreactivity (MKI). SIDS infants had a greater mean CSF MKI (0.54 pmol/ml) than controls (0.41 pmol/ml) (p = .01). Time from death to autopsy and age, when examined as possible confounding variables, did not contribute to the MKI difference between groups. No subpopulation in the SIDS group were evident relative to MKI.

The effects of death on CSF met-enkephalin levels and the relationship of CSF met-enkephalin to more central levels and effects are unknown. Nevertheless, this study has shown a small, yet statistically significant excess of CSF MKI in SIDS relative to controls. The clinical significance of this finding requires further research.