

- 43** **ADOPTIVE MATERNAL CONCERNS AND BELIEFS.** Marilyn M. Chan, Charles W. Ralston, and Gary M. Chan, Nursing & Pediatrics, Univ. of Utah, Salt Lake City.  
As part of a larger study of maternal-adopted infant behaviors, an interview schedule was administered to 17 adoptive and 13 birth mothers. A qualitative item analysis was used for the interviews. Comparisons were made between birth and adoptive mother's responses. Mean age of the adoptive mothers was 33.6±4 yrs with adopted infants 11±9 weeks. Mean age of the birth mothers was 31.3±5 yrs with infants 8±9 weeks. There was no difference in SES, maternal education or previous mothering experience. Four themes developed: 1) fantasy about their infant; 2) maternal role acquisition; 3) anticipatory planning; and 4) infant's characteristics. Ninety-two percent of birth mothers had fantasy about their infant. However, 24% of adoptive mothers fantasized that their infant would be taken away. While 92% of birth mothers described their maternal role acquisition as gradual, 52% of adoptive mothers stated it was "right away". 29% felt the adopted infant was a stranger and they felt like a "babysitter". Anticipatory planning or "nesting" behaviors were described by 77% of birth mothers; only 29% of adoptive mothers performed nesting behaviors prior to placement; 41% after placement. Both birth and adoptive mothers had similar beliefs regarding infant's activity level, physical features, temperament and cognitive features. Themes that emerged that were of concern to adoptive mothers were: the shared experience of adoption (due to birth parents), ambiguity or protective coping feeling of possible relinquishment and antagonistic feelings regarding the adoption process. Thus, our study found differences in concerns and feelings between birth and adoptive mothers.

- 44** **TEMPERAMENT CHARACTERISTICS OF PRETERM (PT) INFANTS AND CONCURRENT NEUROLOGICAL ABNORMALITIES.** Cynthia Garcia Coll, Betty R. Vohr, Laura Emmons, Benjamin S. Brann, Phillip W. Shaul & William Oh. Brown Univ., Women & Infants Hosp., Dept., of Ped., Providence, RI. 02905

We have previously shown that prematurity and degree of Intraventricular Hemorrhage (IVH) are related to the temperamental characteristics of the infant at 3 months corrected age (CA). We hypothesized that similar results would be obtained at 7 months CA, and that these characteristics would be related to concurrent neurological abnormalities. Eighty-five infants (15 full-term (FT); 23 PT with no IVH; 20 PT with IVH Grade I-II; 27 PT with IVH Grade III-IV) were assessed with a laboratory behavioral observation of the infant's temperament and a neurological examination performed by independent examiners. All PT infants were less positive ( $p < .05$ ), less sociable ( $p < .05$ ) and less active ( $p < .05$ ) than FT infants, replicating our previous findings at 3 months CA. Both cranial nerves and postural reflex abnormalities were related to less positive, less active and less reactive behaviors (all  $p < .05$ ). Head size and tone abnormalities as well as asymmetries of tone or reflexes were also related to less reactivity (all  $p < .05$ ). We conclude that both prematurity and neurological sequelae of IVH, rather than IVH itself, are related to the infant's temperament.

- 45** **CRY ANALYSIS IN INFANTS OF NARCOTIC ADDICTED MOTHERS.** Michael J. Corwin, Howard L. Golub and Margaret Potter, Boston U Sch of Med, Boston City Hosp, Dept of Pediatrics, Boston. (Spon. by Joel J. Alpert)  
Infants born to narcotic addicted mothers exhibit a withdrawal syndrome characterized by signs of CNS irritability including a high pitched cry. Previous studies suggest that acoustical cry features reflect CNS function. To test the hypothesis that cry analysis may provide a measure of CNS irritability, we analyzed 90 cries from 24 infants of addicted mothers and 32 cries from matched controls. A clinical abstinence score was also determined just prior to each cry. All cries were recorded for 30 seconds following a painful stimulus and were analyzed by computer to determine 4 types of cry variables: fundamental frequency (f0), 1st formant (F1), timing and mode. Although infants of narcotic abusers only exhibited a trend toward higher f0 values (which correlates with pitch) when values were compared during the typical cry mode (437 vs 387 Hz  $p = .08$ ), withdrawing infants had significantly increased "falsetto" mode crying (16% vs 4%  $p = .015$ ). Falsetto mode f0 is 4-5X that seen in the usual mode (i.e. higher pitch). Withdrawing infants also had more short cry utterances ( $< .05$  sec) during the 30 sec. cry (21 vs 12  $p = .02$ ), however the duration of the 1st normal cry utterance was positively correlated with the clinical abstinence score ( $r = .30$ ,  $p = .005$ ). These data indicate that withdrawing infants have difficulty achieving stable vocalization. These findings are consistent with abnormal CNS control of the larynx and suggest that cry is an objective measure which may be useful in assessing CNS function.

- 46** **HYPERPHAGIA IN FOSTER CARE CHILDREN.** Gary W. Diamond, Janet M. Demb, Ruth Kaminer, Bee Soles. (Spon. by Herbert J. Cohen). Albert Einstein College of Medicine, Department of Pediatrics and Rose F. Kennedy Center, Bronx, New York.  
Hyperphagia, defined as excessive appetite, characterized by a grossly increased intake of and constant searching for food, was noted in a group of 15 foster children evaluated for developmental impairment or behavioral management problems. Caretakers described these children's eating habits as showing a driven quality without achievement of satiety or pleasure. These behaviors were evident when the children first came into foster care and often persisted over time. The hyperphagia did not result in excess weight gain; only one child achieved substantial increase in weight on followup. The children in the group tended to have mild degrees of intellectual impairment, while emotional and behavioral problems were frequent and severe. 80% of the children functioned in the mildly retarded range; 53% had Attention Deficit Disorder with Hyperactivity and 47% had a form of Pervasive Developmental Disorder. Speech and language problems were common; 73% had articulation disorders and 40% other types of language impairment. Sixty percent of the biological mothers were known to have histories of alcohol and/or drug abuse. Though eating disorders have been described among mentally retarded individuals, there is no report of long-term hyperphagia among children with mild mental retardation with the exception of Prader-Willi syndrome. Its presence signals the existence of substantial childhood psychopathology as well as the increased risk for deviant behaviors in adulthood.

- 47** **MOTHERS RECOGNITION OF THEIR NEWBORNS BY OLFACTORY CUES.** Arthur Eidelman, Marsha Kaitz, Anita Good, AnneMarie Rokem, Shaare Zedek Medical Center, Department of Neonatology, Hebrew University, Department of Psychology, Jerusalem, Israel.

Forty two mothers who demonstrated an ability to identify standardized scents were tested as to their ability to recognize their own infant's smell. Positive recognition was defined as the ability to distinguish the infant's nonsoiled undershirt from two other infants' shirts. The undershirts were worn by the infants at least 13 hours prior to test period. Mothers were grouped by total time of previous exposure to their infants. All infants were healthy full term infants born after uncomplicated pregnancies and deliveries. In Group 1 (n=10) with exposure of less than 10 minutes, successful recognition occurred in 20%; Group 2 (n=10), exposure 10-60 minutes, success was 90%; Group 3 (n=22), exposure over 1 hour, success was 100%. There was no effect of maternal analgesia or anesthesia on recognition rate. We thus conclude that the newborn's body odors are important cues for maternal identification of their babies in the immediate newborn period.

- 48** **RECOGNITION OF NEWBORN BY MOTHERS AND NONPARENTS: A COMPARATIVE STUDY.** Arthur Eidelman, Marsha Kaitz, AnneMarie Rokem, Shaare Zedek Medical Center, Department of Neonatology, Hebrew University, Department of Psychology, Jerusalem, Israel.

Mothers' ability to recognize their infants faces from a standardized Polaroid color photo was compared to nonparent subjects (students). Maternal visual exposure to infant was in immediate postpartum period in the delivery room. Students viewed infants on 1st day of life in nursery. Exposure time was limited to 10 minutes in each group. Positive result was defined as ability to distinguish specific infant photo from a group of 7 pictures. Fifty percent of mothers did not receive any medication, 43% received narcotic analgesia and 7% had an epidural. Only 37% (11/27) of the mothers could identify their infant as compared to the 73% (27/37) success rate in the nonparent group ( $p < .01$ ). Additional similar recognition study of adult faces noted maternal 41% (7/17) success versus student (13/14) success of 93% ( $p < .05$ ). No effect of parity, maternal age, education or analgesia/anesthesia was noted. These results suggest that mothers have a limited capacity for visual recognition in the immediate postpartum period, and that limited exposure to the infant in the delivery room is insufficient for subsequent facial recognition of the infant by the majority of mothers.