

43

**A PARENT-TO-PARENT PROGRAM.** Sandy Garrand, Erika R. Forte, Dessa Rentchler, Pam Grant, August L. Jung. (Spon. by Lowell Glasgow). University of Utah Medical Center, Department of Pediatrics, Salt Lake City, Utah.

The University of Utah Intermountain Newborn Intensive Care Center has developed a unique support system for parents called the "Parent-to-Parent Program". With the impact of the multi-stress experience for families and the ever present depletion of nursery staff energies to deal with the ongoing emotional needs of infants' families, it became evident that one of the most valuable resources in meeting the needs of families--parents who had gone through the NICU experience themselves--was not being utilized. Through volunteer visiting in the unit during evening hours, visits and calls to mothers in referring hospitals and pictures and letters to those parents unable to visit because of distance, the 30 members of the Parent Program offer ongoing support. Very positive effects have been seen when parents going through the crisis of the birth of a sick newborn can talk with another parent who had previously gone through the crisis.

This group also has been involved in speaking to groups of professionals about their experience in the NICU in an effort to increase empathy and understanding among nursery staff. An ongoing blood drive for NICU infants has been organized, as well as a housing project to provide more economic and expedient traveling for those parents from out-of-state. They have been active in organizing trained baby sitters through the College of Health for parents of newly discharged infants. The graduate parent group is currently becoming involved in death and dying support systems and "peer groups".

46

**INFANT TASTE RESPONSES ARE CORRELATED WITH BIRTH WEIGHT AND UNRELATED TO INDICES OF OBESITY.** Joel Grinker, The Rockefeller University. (Spon. by JoAnne Brasel, The Institute of Human Nutrition, Columbia University) New York, NY.

Intakes of 4 sweet carbohydrates (sucrose, dextrose, lactose and fructose) at 4 concentrations (1/16, 1/8, 1/4, 1/2M) were obtained in 64 healthy term infants (32 males, 32 females) within 72 hours of birth. Intakes of a test sugar and a standard sugar (1/8M sucrose) were measured in 3 minute tests scheduled midway between feedings. Order of presentation of test sugar and concentrations was randomized. Infants discriminated between sugars and concentrations, demonstrating a distinct preference or greater intake for sweeter solutions. Intakes were unrelated to sex, maternal parity, order of presentation, breast or bottle feeding or age in hours. Anthropometric measures of infant and mother were obtained (mid-arm circumference, triceps skinfold, birth weight and maternal weight at term, maternal weight gain, birth length and maternal height). Intake for the standard sugar was significantly correlated with birth weight, length, infant triceps and circumference. No maternal measure correlated with infant intake. The contribution of low-birth weight infants ( $\leq 3000$  gms) to these correlations was primary. Only the intakes of low-birth weight infants were different from other infants. These data suggest 1) Intake is directly influenced by taste, 2) Infant or maternal indices of fatness are unrelated to taste responses, 3) Infants weighing  $\leq 3000$  gms show lower taste responsiveness. NSF-BNS76-09957  
Studies conducted at the Perinatology Center at NY Hospital, NYC.

44

**ODOR PERCEPTION IN CHILDREN IN RELATION TO NASAL OBSTRUCTION.** S. Nasrin Ghorbanian, Jack L. Paradise, Richard L. Doty. Univ. of Pittsburgh School of Med., Depts. of Pediatrics and Community Med. and Children's Hosp. of Pittsburgh, Pittsburgh; and Univ. of Pennsylvania, Monell Chemical Senses Center, Philadelphia.

To determine whether nasal obstruction results in impaired nasal function, we assessed olfaction in 48 children, 22 of whom had moderate or severe nasal obstruction due mainly to adenoid hypertrophy. Olfactory detection thresholds were established by a single-staircase procedure employing varying concentrations of phenyl ethyl alcohol, a rose-like odorant. Nasal obstruction ratings were calculated from clinical estimates of mouth breathing and hyponasality, scored respectively on a four-point scale and averaged. Relationships found were as follows:

Olfactory Threshold Score	No. subjects with nasal obstruction rating			
	1.0 (none)	1.5-2.0 (mild)	2.5-3.0 (moderate)	3.5-4.0 (severe)
-4.50 to -3.75 (good)	12	9	3	3
-3.50 to -2.50 (fair)	1	4	3	3
$\geq -2.25$ (poor)	0	0	3	7
Totals	13	13	9	13

$$\chi^2 = 21.76 \quad df = 6 \quad P < .005$$

Odor perception is involved in orientation, self-protection, alimentation, and the receipt of pleasure--all functions bearing on the quality of life and of seeming importance developmentally. Impairment of odor perception appears closely related to the degree of nasal obstruction, and is a factor that deserves consideration in decisions regarding therapeutic intervention.

47

**SELF-IDENTIFICATION AND ADAPTIVE MECHANISMS OBSERVED IN LONGITUDINAL PSYCHOMOTOR STUDIES OF XIPHOPAGUS CONJOINED TWINS.** R. Harper, D. Stern, C. Sia, V. Bongiovi, and D. Horn, Depts. of Ped., Ob.-Gyn., & Psych., No. Shore U. Hosp., Manh., NY & Depts. of Ped., Ob.-Gyn., & Psych., Cornell U. Med. Col., NY, NY (Intr. by Mervin Silverberg).

The birth of xiphopagus conjoined twins presents a unique condition, only 11 sets having survived separation since 1689 free of anomalies. In none have psychologic and psychomotor development been recorded pre- and post-surgery. Therefore a 100-hour videotape analysis of a pair of xiphopagus twins was undertaken. A startling observation was the absence of en-face positioning between the twins ( $p < .001$ ). Visual stimuli at the midline were only minimally attended to by the twins in the eye-to-eye direct frontal position, although they attended to the same stimuli from other positions ( $p < .001$ ). Reciprocal hand-knee pre-surgery greeting behavior persisted post-surgery. Severe neck hyperextension and lumbar lordosis continued as the position of choice after surgery. A modified Bayley Motor Scale and Denver Developmental Screening Test administered prior to surgery at 6 months of age delineated a 4-month gross motor development lag; partial compensation occurred by 3 months after separation. These studies document that the development of mental and psychomotor functions can be altered by physical constraints and anomalous development may persist.

45

**EMOTIONAL IMPACT ON FAMILIES OF LESS THAN 1,000 GRAM BABY IN A NICU.** Gail Gibbs, Thomas D. Coleman, August L. Jung. (Spon. by Lowell Glasgow). University of Utah Medical Center, Department of Pediatrics, Salt Lake City Utah.

A study of the emotional impact on 164 parents of 94 infants weighing less than 1,000 grams, admitted to an NICU from Jan. 1, 1975, through June 30, 1977, revealed a difference in feelings of sadness, helplessness and self blame between mothers and fathers, with mothers more often labeling these emotions as extreme and fathers more often labeling them as not present. The ability to carry out regular activities (care of other children, personal appearance, household chores and employment) was stated as not affected by 66% when the baby died, 54% indicated no effect when the baby lived.

Family relationships: 97% were married at the time of birth, 93% are now. When the baby lived, 43% now plan on fewer children than were planned prior to the birth, 16% when the baby died. When the baby lived, 60% viewed their spouses adjustment as very good, 16% when the baby died. 63% of parents, when the baby lived, reported the experience made their relationship closer, 57% when the baby died. Parents stated there was no significance of changed behavior in siblings. Parents most frequently looked to spouse for support than to others.

Results indicate that (1) the experience is traumatic, (2) there is a difference between partners responses, and (3) responses varied according to whether the baby lived or died.

48

**A 14 YEAR STUDY OF THE MENTAL DEVELOPMENT OF INFANTS MANIFESTING INTRAUTERINE MALNUTRITION (IM) AT BIRTH.** Reba M. Hill; Willie M. Verniaud; Gayle Rettig; Thomas Zion. Baylor College of Medicine; St. Luke's Episcopal Hospital; Department of Pediatrics; Houston, Texas.

The mental achievement of 32 infants manifesting IM at birth without evidence of chromosome abnormalities or intrauterine infection have been compared to 13 well nourished (WN) infants. All infants came from a middle to a high socioeconomic background. Selection of patients was made in 1963 so the Colorado Intrauterine Growth Grid was not available. Retrospective plotting of infant weights showed that 41% of the IM infants fell above the 10th percentile. Knobloch-Pasamanick modification of the Gesell test demonstrated statistically lower scores in fine motor ability in the IM infant at 9 months of age. By 3 years of age all subtest scores were statistically lower in the IM infant except gross motor skills. The WPPSI, WISC, & WISC-R psychometric tests were used at older ages. The following findings were observed in the IM infant compared to the WN infant. Full scale IQ  $< 90$  19%/0; full scale IQ  $> 120$  7%/38%; educatable mental retardate 19%/0; learning disabilities 34%/15%; non-compensated learning disability 18%/0; specific learning disability 28%/15%; special education 19%/0; seizures beyond the newborn period 13%/8%; language problems 16%/0; significant visual problems 3%/0; medical Rx for hyperactivity 9%/0. Evidence of IM in infants at birth may serve as an important clinical marker for potential learning disability in the infant at an older age.

- Work supported by the MacDonald & the Doris Hebbard Knapp Fund