

97 THE ACCURACY OF THE DIAGNOSTIC PROCESS IN HOSPITALIZED PEDIATRIC PATIENTS. Barbara E. Strassberg, Celeste M. Madden, Frank A. Oski. Upstate Medical Center, State University of New York, Syracuse, New York.

Although much attention is devoted to the diagnostic process in medical school and postgraduate training, very little effort has been devoted to an analysis of the success of this process in unselected patients. In an attempt to gain insight into the accuracy of this process we developed a classification scheme and applied it to a sample of our pediatric hospitalizations. Of the 442 patients in our sample, 92.3% were discharged with a correct diagnosis, 7.5% were discharged without a diagnosis, and 0.2% were discharged with a diagnosis which ultimately proved to be incorrect. Of the 408 patients discharged with a correct diagnosis, 29.2% had a previously established diagnosis, 40.2% had a correct diagnosis made at the time of admission, and 30.6% had a diagnosis made during the hospital stay.

A total of 159 patients were admitted without a diagnosis. In this group, 15.7% were never diagnosed. A longer mean hospital stay was found for those patients in whom no diagnosis was made by the time of discharge. Of the 408 patients discharged with a correct diagnosis, 147 patients were discharged with a "pre-sumed" diagnosis -- most of these patients had infectious diseases that were of apparent viral etiology. This study should provide a standard for comparison and highlights the strengths and weaknesses of the diagnostic process.

98 EFFECTIVENESS OF CONTACT BEHAVIORS IN STRESS REDUCTION BY HIGH-RISK INFANT MOTHERS WITH THEIR YEAR OLD INFANTS. Annabel J. Teberg, Vann V. Howell, Willis A. Wingert (Spon. by Joan E. Hodgman). Univ. of So. Calif. Sch. Med. LA County-USC Med. Ctr., Dept. of Pediatrics, Los Angeles.

Questions have been raised concerning the long range effects of interference with healthy bonding and attachment between high risk mother-infant dyads. A tool observing maternal behaviors of high risk mother/infant dyads (mothers of infants with BW <1500 gm N 69 and teenage mothers N 26) in a set situation was evaluated and the results compared with a control group of 30 mothers of normal infants. All mother/infant dyads had the same ethnic and socioeconomic background. Mothers were observed for response to their infants by sensory contact behaviors directed to releasing infant stress. Visual, verbal, physical contact and facial expression were evaluated. Test results showed that maternal contact resulting in infant stressing reduction was reduced in all areas described above for teenage mothers and mothers of LBW infants when compared to control mothers. Only 7.8% of teenage mothers gave verbal support to their infants compared with 35% of LBW infant mothers and 78% of control mothers. Warm physical contact was evidenced by 4% of teenage mothers compared with 19.3% for LBW infant/mothers and 28.3% for the control group. The study results indicate decreased effective maternal stress reducing behaviors in high risk mothers when compared with normal controls. This was more marked in teenage mothers than LBW infant mothers.

99 VISITING BY SIBLINGS IN A NEONATAL INTENSIVE CARE UNIT (NICU). Brenda A. Tolbert, Frederick J. Schwab, Stephen J. Bagnato and M. Jeffrey Maisels. Penn State Univ College of Medicine, M. S. Hershey Medical Center, Depts of Pediatrics, Social Service, and Psychiatry, Hershey, PA.

Negative changes in sibling behavior have been documented following the birth of a newborn. They may be exaggerated by the prolonged hospitalization which occurs when sick neonates are admitted to NICUs. We randomly assigned 15 siblings (ages 3.8-7.25 years) of infants admitted to our NICU to a visiting group (n=8 permitted inside NICU, touch, hold neonate) or a control group (n=7 came to hospital for interview only). A structured interview was administered to sibs directly after the visit. Parents responded to questionnaires comparing the child's behavior before and after the neonate's birth, one week after admission to NICU and one week after experimental (or control) intervention. 80% of all children showed some behavioral changes after birth of the infant and both groups showed improved behavioral trends following the intervention. No differences were found between groups. 3/5 siblings in the control group and 0/5 in the visiting group gave negative or fearful descriptions of the hospital (p=0.08). None of the visits were disruptive of patient care and none of the children asked to leave the unit. Parents' comments were uniformly favorable. No nosocomial infections were documented following visits. In this study no detrimental effects and some favorable effects were found when siblings of this age were permitted to visit sick neonates in the hospital.

100 HEARING IMPAIRMENT IN LOW BIRTH WEIGHT (LBW) CHILDREN. B. Vohr, B. Regan, P. Daniel, W. Oh. Brown Univ. Program in Medicine, Women & Infants Hosp., Dept. of Ped., Providence, RI.

Audiometric tests (tympanogram, acoustic reflex, and pure tone) were performed at 3-5 years of age on 41 LBW (<1600 gms.) survivors born between Sept. '74 and Dec. '77. Oxygen requirements were used to prospectively categorize the children into high risk (Group I, n=23) with $F_{iO_2} > 0.21 > 20$ days and low risk (Group II, n=18) with $F_{iO_2} > 0.21 < 6$ days. Group I had a more severe neonatal course with more asphyxia (Apgar ≤ 4 at 1 min.) (p<.02), acidosis (p<.01), BPD (p<.01), sepsis (p<.01) and days of hospitalization (M±SD) 92±28 vs. 62±15 (p<.01). The groups had a similar socioeconomic scale rating. Audiometric testing revealed 16/23 (62%) of Group I had conductive hearing loss compared to 7/18 (38%) of Group II (p<.01). The children with conductive hearing loss had a greater incidence of respiratory morbidity (pneumonia, otitis media or chronic wheezing) between 4 months and 3 years (p<.01). Sensorineural loss was identified in 2 children in Group I and 1 child in Group II. Moderate to severe hearing loss (conductive or sensorineural) (>40 dB) was greater in Group I (9 of 23) than Group II (1 of 18) (p<.02). Bayley MDI scores and Stanford Binet tests of the hearing loss children vs. normal hearing children revealed no significant differences between 9 months and 3-4 years. We conclude that LBW survivors with a more severe neonatal course are at significant risk of developing conductive hearing loss although the latter, per se, did not adversely affect the developmental test scores of the LBW survivors.

101 BIOFEEDBACK THERAPY FOR FECAL INCONTINENCE IN CHILDREN WITH MENINGOMYELOCELE. Arnold Wald (Spon. by Richard H. Michaels), University of Pittsburgh School of Medicine, Montefiore Hosp., Depart. of Med., Pittsburgh, PA

Fourteen children with meningomyelocele and significant fecal soiling underwent anorectal manometry using a 3-balloon system connected to a physiograph. The ages of the children ranged from 5 to 17 years. On the basis of manometric criteria demonstrating some rectal sensation, 8 patients were treated with biofeedback conditioning. Children were taught to contract the external sphincter or nearby gluteal muscles in response to various volumes of rectal distention. Four of the 8 patients who received biofeedback had a good clinical response with either disappearance of soiling or a greater than 75% improvement in the frequency of soiling. Followup periods ranged from 3-12 months. The minimal criteria for successful treatment appeared to be: 1) Normal threshold of rectal sensation and 2) Ability to contract gluteal or related muscles. Responses to biofeedback could not be predicted by age, sex, surgery for spinal cord tethering, CSF shunts or bracing, but was best predicted by the anorectal manometric findings. On the basis of this experience, the following conclusions can be drawn: (1) Anorectal manometry is a rapid and inexpensive test to identify children with fecal soiling associated with meningomyelocele who may benefit from biofeedback conditioning. (2) Biofeedback is an effective therapeutic technique for fecal incontinence and should become an important part of bowel management programs for children with primary neurogenic sphincter dysfunction.

102 DRUG INGESTION BY RURAL WOMEN DURING PREGNANCY. Thomas J. Wells, Reid Woodard, and Peter Gal (Spon. by L. Glasgow), University of Utah and Utah State Division of Health, Salt Lake City, Utah.

During pregnancy, most studies of medications given have centered around urban centers. Most of these studies emphasize teratogenic effects or CNS depression. Few studies have looked at over-the-counter (OTC) drugs and none at medications taken by women in rural settings. OTC drugs used by 60 women during pregnancy in Guilford County, N.C. were assessed. Although the area is not strictly rural, it is far less urban than other areas where pregnant women's drug histories were studied. Histories were obtained through a patient interview. An average of five (5) were ingested by each patient. The most common drugs consumed were vitamins 92%, caffeine 80%, iron 73%, acetaminophen 62.5%. Few teratogenic agents were found. Acetaminophen 62.5% replaced aspirin as the leading analgesic. Drugs of abuse were not emphasized so few were reported. Significance of the study appears threefold. One, most of the OTC drugs taken by rural women appear similar to that taken by urban women in other studies. Two, acetaminophen, a drug about which little is known of its effects on the fetus, has replaced aspirin as the leading analgesic and may pose a significant threat to the fetus and newborn infant. Finally, caffeine continues to be consumed by many pregnant women. If animal studies where large amounts are consumed are valid, the drug can cause teratogenic effects and may prove a significant risk to the human fetus.