

662 A MANUAL AND SCORING SHEET FOR NUTRITIONAL ASSESSMENT OF THE PEDIATRIC PATIENT. Janis E. Zvargulis, Eileen E. Tyralla, Jefferson Medical College, Temple University School of Medicine, St. Christopher's Hospital for Children, Departments of Pediatrics, Philadelphia, Pa. (Sponsored by Loretta P. Finnegan.)

A manual and scoring sheet for nutritional assessment of the pediatric patient has been developed. The manual includes a list of appropriate dietary and medical historical questions to aid in identifying the pediatric patient at risk for nutritional deficiencies; a system oriented nutritional physical examination to identify physical findings of nutritional deficits; and a list of specific nutritional deficits associated with pediatric disease processes. Guidelines are included for obtaining, 1) additional blood studies such as serum vitamin and mineral levels, 2) x-ray studies, such as chest x-ray, bone age, and CT scan of the brain, 3) EKG, 4) and collections of urine and feces.

The scoring sheet includes consideration of percent ideal body weight, percent weight change, weight for height, triceps and subscapular skin fold thickness, arm muscle circumference, albumin, transferrin, skin testing, and absolute lymphocyte counts that have been adapted for use in the various age groups within pediatrics. A numerical score is assigned to each item indicating degree of deficit and a total nutrition score is calculated. A score of 0 to 5 indicates normal nutritional status, 6 to 10 mild, 11 to 15 moderate, and >15, severe nutritional deficits. This type of manual and scoring sheet provides a means to teach concepts of pediatric nutritional assessment.

GENERAL PEDIATRICS, EDUCATION AND TRAINING

663 PERINATAL PSYCHOSOCIAL TRAINING PROGRAM. G. Alfasi, C. Schaffer, A.R. Fleischman, Albert Einstein Coll Med, Montefiore-North Central Bronx Hosps., Depts Psychiatry & Pediatrics, Bronx, N.Y.

There is an increasing awareness of the need for formal training in behavioral and social aspects of pediatrics. Housestaff response to a new training program in perinatal behavior was studied. The program, run by a psychiatrist and psychologist, was directed at the 7 house officers each month on the neonatal service. Instructional methods included integration of discussions of psychosocial issues on medical rounds in both the well and intensive care nurseries, weekly psychosocial rounds, didactic seminars, interviews with parents and house officers, neuro-behavioral assessment exams, and guest speakers.

Attitude questionnaires concerning the importance of the behavioral sciences and mental health professionals in medical care were obtained from housestaff (n=29) at the beginning and end of each month's rotation. Items were scored on a 5-point agreement scale (strongly agree-strongly disagree). Mean values were compared between beginning and end of the month and revealed a significant ($p < 0.025$) improvement in attitudes toward the importance of the behavioral sciences and mental health professionals in medical training.

It is concluded that a comprehensive training program in behavioral and psychosocial issues can be integrated into neonatology and enhance housestaff attitudes toward education in these areas.

664 DEATH COUNSELING AS IT RELATES TO ADEQUATE PSYCHOSOCIAL SUPPORT BY THE PHYSICIAN FOR THE DYING CHILD AND FAMILY, Marylou Behnke, Paulette Mehta, (Sponsored by James Talbert) University of Florida College of Medicine, Department of Pediatrics, Gainesville.

Dying children and their families need psychosocial support. This study's goal was to determine how pediatric housestaff perceived the adequacy of support they gave dying children and their families, how often counseling was sought, and how much training housestaff had received. The study group consisted of 29 housestaff (18 males, 11 females) who graduated from a variety of medical schools from 1976 to 1980. Twenty-four housestaff (15 males, 9 females) responded to a survey pertaining to training in death counseling; frequency of need to counsel about death; frequency of post-mortem counseling; and confidence in meeting family and patient needs. Only 6 of 24 housestaff had received formal training in death counseling. Children approached housestaff for death counseling in 44 instances, involving 15 housestaff. Post-mortem counseling was sought by 25 families, involving 9 housestaff. Fourteen housestaff (8 males, 6 females) felt totally inadequate to counsel dying patients and their families; 5 housestaff (2 males, 3 females) felt ambivalent about it; and only 4 housestaff (all males) felt confident to counsel in these circumstances. This study suggests a need for more intensive physician training in death counseling to aid the physician in providing adequate psychosocial support for dying children and their families.

665 RESIDENTS' CONTINUITY CLINICS: AN EFFECT ON SUBSPECIALTY UTILIZATION. David A. Bergman (Spon. by Roberta A. Ballard). Mt. Zion Hospital and Medical Center, Department of Pediatrics, San Francisco, California.

As a part of ambulatory pediatric training, a resident must learn to provide general care and to seek subspecialty consultation where appropriate. Traditional training programs have fallen short in teaching this skill and have often encouraged patients to be followed in subspecialty clinics. A resident-staffed continuity clinic could be expected to influence both these factors in the direction of decreasing inappropriate subspecialty utilization. To test this hypothesis we measured pediatric and non-pediatric subspecialty clinic utilization rates before and after the introduction of a resident-staffed primary care continuity clinic. Utilization rates (the number of specialty clinic visits per 1000 general pediatric visits) were calculated for comparable six month periods before and after the intervention. There was a significant decrease in pediatric specialty utilization rates from 1.88/1000 to 1.26/1000, $X^2 = 13.81$ $P < .001$. Non-pediatric subspecialty clinic utilization also decreased, but at a non-significant level. To exclude any bias introduced by variation in illness level in the patient population, the total hospitalization days and hospitalization rates for certain indicator conditions were analyzed and no significant differences before or after the intervention were found. These results indicate that a resident-staffed primary care continuity clinic can reduce subspecialty utilization and suggest that the resident can learn to be more discriminating in his use of these services.

666 ANEMIA HYPOPROTEINEMIA AND EDEMA SYNDROME IN CYSTIC FIBROSIS. Jen-Yih Chu, Anthony Rejent, St. Louis University, Cardinal Glennon Memorial Hospital for Children, Department of Pediatrics/Adolescent Medicine, St. Louis, MO.

Five of approximately 100 children with cystic fibrosis (CF) followed in our clinic in the past 11 years presented with the syndrome of anemia hypoproteinemia and edema, as their initial manifestations. The age at onset varied from 5 wks to 3½ months. CF was not diagnosed at the time of presentation in 3 patients, & 2 of them received transfusions in the referring hospital. Transfusion resulted in a resolution of symptoms, but the syndrome recurred in a few weeks. In 1 patient, the presenting complaint was only anemia, but the diagnosis of CF was made a few weeks later when she developed pneumonia and edema. In 2 infants, anemia developed within 1 week after the patients were admitted for work-up of edema. All of them later received transfusions. One patient had an elevated erythropoietin level. Serum albumin varied from 0.9 to 2.6gm/dl. Two infants were breast fed, 2 received cow's milk formula, and 1 soy formula. All patients were treated with intravenous albumin, pancreatic enzymes, multivitamins, vitamin K, casein hydrolysate formula, and vigorous pulmonary therapy. All of them improved and had no recurrence of the syndrome on a long-term follow-up. One patient had a normal sweat chloride, another had a borderline high normal value when first examined. However, both had elevated sweat chloride levels when the edema subsided. The initial sweat chloride test may be misleading. This syndrome of anemia hypoproteinemia and edema as the initial manifestation of CF is not uncommon and should be recognized.

667 THE EFFECT OF TRIPLE DYE ON SHEDDING OF THE UMBILICAL CORD. David A. Clark, Cheryl L. Davis and Judith A. Gardner. Dept. of Pediatrics, SUNY, Upstate Medical Center, Syracuse, NY (Spon. by M. L. Williams).

Triple dye is commonly applied to the umbilical cord of newborns to decrease the incidence of bacterial infection and colonization. We examined the time of umbilical cord separation in 100 full term infants and 52 premature infants whose cords had been treated with a single application of triple dye. The preterm infants' mean birthweight was 1856 gm. and mean gestational age 33.5 wks. The umbilical cords had not been manipulated for a procedure. There were no anomalies of the umbilical cord in this series.

In the term infants the mean age of cord separation for males was 12.2 days and for females was 11.9 days. In the premature group the mean age for both males and females was 11.5 days.

Several previous studies have shown that in the absence of triple dye use, 80% of the umbilical cords were shed on or before the 8th day of life. Less than 5% of the cords were shed beyond 10 days. 56% of our full term infants and 63% of the preterm infants shed the umbilical cord beyond 10 days.

A recent study (Hayward A et al, Lancet 1979 1:1099) reported delayed separation of the umbilical in association with defective neutrophil mobility. This data suggests that triple dye may prevent bacterial colonization and perhaps remove the antigenic stimulation for neutrophil chemotaxis to the umbilical cord.