

31 ON FIELD PHYSICIAN EVALUATION OF HIGH SCHOOL FOOTBALL INJURIES. B. Truxal, I.R. Shenker, M. Nussbaum, (Spon. by P. Lanzkowsky). Sch. of Med., Health Sciences Ctr., State Univ. of N.Y. at Stony Brook and Long Island Jewish-Hillside Med. Ctr., Dept. of Ped., New Hyde Park, N.Y.

During the Fall of 1980, 8 physicians served as team physicians at 31 junior and senior high interscholastic football games at 6 regional schools. We studied type of injuries in relation to positions played, level of play and playing conditions. At the 31 games, 38 injured players requested evaluation or were observed to require it by the physician. The great majority of the injuries were contusions, sprains, and strains, with the upper and lower extremities being injured more frequently than the head or trunk. Of the 38 injuries, only one was life threatening (a tension pneumothorax) and 7 others were considered serious or potentially serious on the field. These included concussion, dislocations, possible fracture, possible peripheral nerve injury, and internal derangement of the knee. A higher number of injuries occurred on rainy days and muddy fields compared to dry playing conditions. The data suggests that injuries were less frequent in freshman games compared to varsity level competition. On the field treatment was limited to resting the player, immobilization, and application of ice. Four players were removed to emergency rooms before the conclusion of the game. Physician response to this work was generally favorable, although opinions differed as to the need for an M.D. to be in attendance at these football games although State law mandates this. Our findings may help to define the medical needs of local and senior high football programs.

32 ADOLESCENTS WITH CANCER: PATIENT AND PARENT PERCEPTIONS OF IMPACT OF ILLNESS. Lonnie Zeltzer and Samuel LeBaron. (Spon. by Philip A. Brunell). The Univ. of Tex. Health Sci. Ctr., Dept. of Pediatrics, San Antonio, Texas.

Since parents are important sources of support for adolescents (adoles) with cancer (ca), one needs to know if parents and their children share the same perceptions of illness-related problems. As part of our study of adolescents with ca, an impact of illness questionnaire was given to 23 patients (pts), 22 of their mothers (M), and 14 of their fathers (F) to determine: (1) the impact of ca on the pts reported by M, F, and pts and (2) the type of disruption seen by each. M and F each reported more illness-impact on the pts than did the pts themselves ($p < .0001$), while the difference between M and F was not significant. Of the impact-related items, the frequency of responses indicating treatment- and care-related disruption of the pt was 52% by pts, 68% by M, and 73% by F. M, F, and pts all agreed in their perceptions that the adolescents were very hopeful and coped well with illness, in spite of the considerable impact reported. M, F, and pts agreed that ca interfered with the pts' popularity, freedom and physical appearance. M and pts agreed that treatments were worse than the illness itself, while F agreed with pts that ca caused general life disruption. The data suggest that parents believe that their adolescents experience more illness-related impact than is reported by these adolescents. Although parents and their children perceive ca as highly disruptive, all remain hopeful. Three areas of functioning ranked by M, F, and pts as highly disrupted were similar to findings of our previous study. These data have implications for helping families provide support for their adolescents with cancer.

BEHAVIORAL SCIENCES, HEALTH SERVICES RESEARCH

33 EFFECTS OF EARLY MALNUTRITION ON SOCIAL BEHAVIOR AT SCHOOL-AGE. David B. Barrett, Marian R. Yarrow, et al. (Spon. by T.B. Brazelton). Harvard Medical School, Children's Hospital Medical Center, Department of Medicine, Boston.

Prenatally malnourished infants show impaired social responsiveness, state control, and attentional capacity. Does undernutrition continue to distort social-affective development in later childhood? This study explores the effects of early nutritional deprivation on later behavior in 2 populations: one in Guatemala, the other in San Diego, California. Subjects in Guatemala were 138 children, age 6-8. All had participated in the INCAP Longitudinal Study which provided ad libitum calorie supplements to pregnant women and later to their children. Pre and postnatal intakes of calorie supplements were the primary independent variables in the present analysis. Dependent measures were assessments of social interaction and affect, obtained by observing children in small-group activities with peers, and cognitive tests. In San Diego, subjects were 65 white, low SES children, age 6-7. For these children, indices of nutritional risk were constructed from maternal questionnaires and medical records. Dependent measures were identical to those in Guatemala. Results were: a) in Guatemala, children who received the highest levels of calorie supplement prenatally and before the age of 2 showed the highest social responsiveness, activity level, and positive affect at school-age; b) in San Diego, prenatal undernutrition was related to social withdrawal, adult dependency, and diminished affect; c) cognitive measures did not correlate with measures of early undernutrition in either study; d) nutritional effects on behavior remained significant when SES was controlled.

34 BREAST VS FORMULA FEEDING: SOLID FOODS, ILLNESS AND WEIGHT GAIN. K. Bloom, R. Goldbloom, and E. Stevens. Dalhousie Univ., Grace Maternity Hosp., Depts of Psychology, Obstetrics and Pediatrics, Halifax, Nova Scotia.

A prospective longitudinal (birth, 6wks, 3mos, 6mos) study of 539 healthy mothers and infants in a North American urban setting was conducted to determine the effects of breast (B) vs formula (F) feeding. Data from those who discontinued breast feeding in the first 6mos (B/F) provided comparative analyses which, in contrast to past studies, discriminated effects associated with SES from effects associated with the type of milk the infant received. The B and B/F groups were comparable in SES and each differed ($p < .001$) from the F group in 4 major SES factors. Both F and B/F groups introduced solid foods earlier than did the B group ($p < .01$ and $p < .001$) and they both tended to use commercially--rather than home-prepared solids ($p < .01$ and $p < .0001$). Within the B/F group duration of breast-feeding and not SES was directly related to these practices. Reported general illness, digestive illness and verified medical treatment was significantly lower in incidence for B, as compared with the F group ($p < .05$ and $p < .01$). Within the B/F group duration of breast-feeding and not SES was directly related to incidence of digestive illness. Finally, among the 3 groups and despite early solid feeding in the B/F and F groups, there were no differences in weight gain. No significant effects were related to gender. This study provided empirical evidence of the health benefits of breast feeding for the first 6mos in a N. Am. sample and empirical distinction between factors related to feeding choice (SES) and factors related to feeding practices.

35 DURATION OF BREAST FEEDING AND EFFECT OF SOCIAL SUPPORT. K. Bloom, S. C. Robinson, and E. Stevens. Dalhousie Univ., Grace Maternity Hosp., Depts of Psychology, Obstetrics and Pediatrics, Halifax, Nova Scotia. (Spon. by R. B. Goldbloom)

Study 1. A prospective, longitudinal study of 249 breast-feeding mothers revealed that 35% of primiparas terminated breast feeding within the 1st 6wks. On the average those who stopped breast feeding in the 1st 6wks breast fed for only 18.2 days. Early termination was related ($p = .01$) to infant behaviours (crying, waking) which were assumed to indicate hunger.

Study 2. An experimental study was conducted to compare maternal perceptions of hunger-related behaviours and to evaluate the effect of social support on increasing the duration of breast feeding. Three groups (N=50 each, primiparas) were randomly selected: Formula (F), Breast Control (BC), Breast Experimental (BE). At 6wks breast-feeding mothers reported higher rates of infant crying ($p = .02$) and night waking ($p = .02$) and less total hours of sleeping ($p = .03$) as compared with formula-feeding mothers. During weeks 1-4, BE mothers were telephoned weekly by a nurse to provide informed support for breast feeding and related infant care. Social support for these primiparas mothers increased their duration of breast feeding to 28.6 days as compared with 21.0 days in the control group ($p < .05$) and 18.2 days in Study 1. These results suggest that the primipara's discontinuance of breast feeding in response to assumed infant hunger can be attenuated by consultation and informed advice from health care professionals.

36 ASSESSMENT OF HOSTILITY IN ADOLESCENT CANCER PATIENTS. Marjorie A. Boeck, Brigid G. Leventhal, Albert Einstein Col. Med., Montefiore Hosp. & Med. Ctr., Dept. Peds. Bx., N.Y. & Johns Hopkins Univ. & Hosp., Dept. Peds., Baltimore, Md.

The degree of hostility encountered in adults with malignancies and its relationship to length of survival has been noted by a number of investigators. Although it has been generally assumed that hostility levels in teenagers are higher than in adult populations, this issue has not been assessed in adolescents with neoplasia. 17 adolescent cancer patients ages 13-18 were evaluated with a structured interview and a standardized self-administered affect scale, the Brief Symptoms Inventory. All patients knew their diagnosis and were not considered to have behavior or compliance problems. Thirty adolescents without chronic illness who presented to a general adolescent clinic served as controls. 8 of 17 cancer patients were > 1 S.D. above the mean on the hostility dimension compared with 8 of 30 controls. Hostility was not apparent on interview or in patient behavior and was only detected by the testing instrument. Mean scores for oncology patients on the hostility dimension were significantly higher for males, patients hospitalized when tested and patients with both biologic parents in the home. Patients with intact families frequently mentioned being overprotected by parents and feeling they were a financial and emotional burden. There were no significant differences for blacks vs whites, newly diagnosed patients vs those in relapse, and patients with leukemia/lymphoma vs bone sarcoma. The degree of covert hostility present in adolescents with malignancy must be appreciated in order to impact upon compliance, patient comfort and survival.