TITLE: PRETREATMENT SERUM PHENYLALANINE LEVELS AS A PREDICTOR OF THE SEVERITY OF THE MUTATION IN THE PHENYLALANINE HYDROXYLASE GENE AND PHENYLALANINE TOLERANCE IN PATIENTS WITH PHENYLKETONURIA.

AUTHOR(S): R.H. Singh, P. Dembure, R.C. Eisensmith, N.V. Guerrero, K. Sullivan and L.J.Elsas. Division of Medical Genetics, Emory University, School of Medicine, Atlanta, Georgia.

LEARNING OUTCOME: To understand that pretreatment serum Phe levels can be used to predict Phe tolerance and disease severity in patients with phenylketonuria.

ABSTRACT TEXT: Phenylketonuria (PKU) is an autosomal recessive disorder caused by the deficiency of hepatic phenylalanine hydroxylase (PAH). This study was designed to determine the correlation between pretreatment serum Phe levels and dietary Phe tolerance in patients with PKU, >2 years of age. Pretreatment serum Phe levels during the neonatal period were obtained 2-3 hours postprandially and analyzed by ion exchange chromatography in thirty seven patients with classic PKU after a positive newborn screening Guthrie test. PAH mutations were classified as severe, intermediate, or mild on the basis of expression analysis of the mutant alleles in eukaryotic cells. Phe tolerance was calculated as the amount of dietary Phe intake in mg/kg body weight per day given as natural protein, while maintaining serum Phe levels within the range of 2-6 mg/dL. Phe tolerance by patients within the three groups was <12mg/kg/day in the severe group, 12-18 mg/kg/day in the intermediate group and > 18 mg/kg/day in the mild group. A strong correlation between pretreatment serum Phe levels and Phe tolerance was observed($p<0.003$). The mean of pretreatment serum Phe levels (mmol/L) in mild, intermediate, and severe groups was 841 ± 500(n=7), 1513 ± 657(n=10) and 1970 ± 781(n=20), respectively. We conclude that the pretreatment serum Phe can be used as one of the predictive parameters by clinicians to estimate future Phe tolerance and severity of disease.

TITLE: IMPLEMENTING CONSISTENT CARBOHYDRATE DIETS IN A 5-HOSPITAL INPATIENT SYSTEM

AUTHOR(S):
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LEARNING OUTCOME:

To describe the steps required to successfully implement the new consistent carbohydrate diets in an inpatient setting.

ABSTRACT TEXT:

In 1994, the American Diabetes Association released the new nutrition guidelines for patients with diabetes, suggesting that consistent carbohydrate diets be implemented rather than using the old calorie-controlled diets. Many facilities have been reluctant to implement these recommendations for various reasons. A multidisciplinary continuous improvement team in a 5-hospital system was formed to implement the guidelines in all 5 facilities. The team reviewed literature and interviewed the health care team in the system to determine the scope of the project. A plan was developed which included the modification of old diets to consistent carbohydrate diets, health care team education, and patient education. The education component was by far the greatest challenge. A pocket card and staff education video was produced and used in conjuction with live inservices at all facilities. Two patient education videos were purchased and placed on the in-house television. A variety of methods were used to inform the medical staff of 1200 physicians. Letters were sent to all physicians on two occasions; information was presented at 24 medical staff meetings; posters were displayed in physician lounges; and a grand rounds session was dedicated to this topic. Articles were also published in the hospital newsletter to reach all employees. After implementation, data was collected on health care team awareness which showed that 82% were knowledgeable of the new diets. Data on accuracy of physician orders showed that 38% of diabetic diets were ordered correctly one month after implementation and 41% after six months. The team is sharing information state wide to facilitate implementation of the new guidelines.

TITLE: STRATEGIES FOR ENHANCING FOOD INTAKE AMONG THE ELDELRY IN LONG-TERM CARE FACILITIES

AUTHOR(S): Yong-Kyang Kim, MS, Oregon State University, Corvallis, OR; Mary Cluskey, PhD, RD, LD, Oregon State University, Corvallis, OR.

LEARNING OUTCOME: To define which feeding enhancement strategies are used and considered effective for increasing food intake among institutionalized elderly in long-term-care.

ABSTRACT TEXT: The extent of use and perceived effectiveness of food intake enhancement strategies were studied using a mailed survey instrument. Operational obstacles to the use of strategies and training used to prepare staff in using feeding strategies were also studied. A total of 311 questionnaires listing seventeen strategies for enhancing food intake among the elderly were mailed to two target populations: (1) Directors of Nursing Service (DONs) and (2) Consultant Registered Dietitians (RDs) in the Pacific region. DONs most frequently use improving the dining room environment, optimal positioning of resident and providing liquid supplements to enhance intake among the elderly in long-term care. Registered Dietitians more frequently use offering snacks, adding nutrients to food and the use of liquid supplements for enhancing intake and less often focus on strategies related to actual feeding. The results revealed that the frequency of use of feeding strategies does not necessarily mean that they are perceived to be effective. DONs and RDs frequently use or recommend most strategies, but doubt the effectiveness of many. Significant differences in the use and perceived effectiveness of strategies between DONs and RDs were also found. DONs more frequently use liquid supplements, specialized feeding utensils, and simple verbal prompts to eat ($p<0.01$). RDs had a more positive perception of the effectiveness of tube feeding for enhancing intake among elders than did DONs ($p=0.0006$). The need for additional food-service/dietary labor cost and/or product costs were considered obstacles to implementing some of the strategies. Most staff training was related to offering liquid supplements: less often was staff trained in actual tableside feeding strategies. Further research is needed to determine why DONs and RDs have different opinions about feeding strategies and their effectiveness. It would be beneficial to measure the actual effectiveness of the use feeding strategies in enhancing intake among the elderly.

TITLE: NUTRITION MANAGEMENT GUIDELINES FOR PEDIATRIC HIV+ PATIENTS

AUTHOR(S): M. Romeyn, MD, M. Bowers, MSW, C. Fields-Gardner, MS, RD/LD, and the Paul B. Michail Working Group. Andrew Ziegler Foundation, San Francisco, CA

LEARNING OUTCOME:

The participant will be able to describe criteria appropriate to nutritional assessment and management in pediatric HIV disease.

ABSTRACT TEXT: Six regions of the United States developed multidisciplinary pediatric HIV-specialist working groups to address nutrition issues in pediatric HIV disease. Literature reviews and professional experiences were summarized and translated into nutrition assessment and management guidelines. The groups included physicians, nurses, nurse practitioners, dietitians, and social workers from Chicago, Los Angeles, Miami/Tampa, New York/New Jersey, San Francisco/Oakland, and Washington DC. Members of the groups agreed that cases of newborn transmission have been dramatically reduced while cases of long-term survivors infected prior to perinatal use of anti-HIV drugs, children of undiagnosed mothers, and sexually-infected children and adolescents may be rising. Nutritional issues of failure-to-thrive still exist, especially in antiretroviral naive children. Cultural issues, family dynamics, inadequate housing, and health care access play a large role in the support of health and survival in the pediatric HIV patient and are often the higher priority above nutrition assessment and management. However, nutrition issues are considered an equal priority with other medical issues. The Centers for Disease Control definition of wasting in pediatric HIV disease was considered inadequate and alternate definitions for the identification of nutritional compromise varied from region to region. Nutrition-related interventions were primarily food-based with supplements as needed. Adjunctive therapies included appetite stimulants and anabolic therapies, though few were commonly used. Particular concern was expressed for culturally appropriate educational materials and methods. Multidisciplinary approaches were encouraged. Guidelines based on the input from the six groups and other reviewers were developed for field testing in the San Francisco/Oakland area and will be available for field-testing and as a basis for nutrition program development for pediatric HIV patients elsewhere in the United States.