

65

CYTOGENETIC FINDINGS IN 311 CHILDREN WITH DOWN'S SYNDROME. R. Coco, Graciela del Rey, Ana María Migliorini, Ana María Tello and J.M. Sanchez. FGH, CED CEDIE, Htal. de Niños. Buenos Aires. Argentina.

Cytogenetic studies were performed in 311 children with Down's syndrome, most of them (65%) from mothers under the age of 35. A total of 304 morgols (Group I) did not have any familiar history of this syndrome, while the other 7 had two or more affected close relatives (Group II).

The chromosomal findings in Group I were as follows: a) 284 patients (93.42%) with regular 21 trisomy and the remaining normal complement, except for one patient who had also an inherited 13:14 translocation; b) 9 patients (2.96%) with regular 21 trisomy mosaicism and c) 11 patients (3.61%) with "de novo" translocations: 9 with 21:21 translocation and 2 with 14:21 translocation. From the 7 patients in Group II, six were mongols with regular trisomy and the other one had an inherited 14:21 translocation.

Although the finding of the inherited 13:14 translocation in our series of Down's syndrome by regular trisomy could occur by chance, it would be important to study the parents' karyotype even in the mongols by regular 21 trisomy, because some balanced translocations could produce non-disjunction of 21 pair due to interchromosomal effect.

66

CYTOGENETIC STUDIES IN COUPLES WITH REPRODUCTIVE WASTAGE. R. Coco, Ana María Migliorini and Teresa Negrotti. FGH, CEDIE, Htal Niños. Ba. As. Argentina.

Chromosome analyses were performed in 92 couples with two or more pregnancy losses. These couples were studied independently of other possible etiologic factors. Forty-six couples had recurrent abortions without any successful pregnancy (Group I). Fourteen couples (Group II) had recurrent abortions, with one or more successful pregnancies. The remaining 32 couples (Group III) had early and late reproductive losses.

The chromosomal anomalies were as follows: Group I a) 6 couples (13%) with balanced translocations: 46,XX,t(2;9); 46,XX,t(2;14); 45,XY,t(13;14); 45,XY,t(14;14); 46,XY,t(10;18) and 46,XX,t(5;9); b) one couple with 45,X/46,XX mosaicism; c) 7 couples (15%) with chromosome heteromorphisms: 46,XX,15p+; 46,XX,1qh+(2 cases) 46,XX,9qh-; 46,XY,9qh+ (2 cases) and 46,XY,17s,17s. Group II one couple with 45,X/46,XX/47,XXX mosaicism. Group III one couple had a 46,XX,t(21;22) and other one a 46,XX,9qh+ heteromorphism.

These results suggest that chromosomal analysis should not be the last study to be performed in couples with reproductive losses.

67

NUTRITIONAL STATUS OF PATIENTS IN A PEDIATRIC HOSPITAL. I ANTHROPOMETRIC ASPECTS. A. Fuentes, E. Hertrampf G. Barrera y R. Uauy. INTA. CHILE.

A nutritional survey was conducted in order to establish the prevalence of malnutrition in patients from the medical and surgical wards. Data on anthropometric indicators of nutritional status were obtained on admission and at the time of the study. They included weight (W), Height (H), Arm Circumference (AC) and triceps skinfold (TS). These values were expressed as % of the reference standard for age (A) (NCHS-USA). The study included 215 patients whose ages ranged from 2 months to 16 years, 58 were surgical and 157 medical patients; 113 were males and 102 females. On admission 25% were of normal W/A but at the time of the study only 19% were in this range. Sixty seven% of medical and 66% of surgical patients had a W/A less than 90% and 29% had low H/A in both groups. The W/H was diminished in 42% of medical and in 15% of surgical patients with a female predominance of low W/H. A.C. was below normal in 65% of medical and in 43% of surgical patients. Seventy three% of medical and 71% of surgical patients presented T.S. below 90% of the standard. We analyzed the weight change of children under two years and related it to the length of hospitalization finding that 72% of patients were losing weight and the rest were gaining at rates below the expected for their ages. Based on this results we can conclude that there is a high prevalence of marasmic energy protein malnutrition. The length of hospitalization relates to a deterioration of nutritional status. Patients present predominantly signs of depletion of the fat and muscle compartments.

68

NUTRITIONAL STATUS OF PATIENTS IN A PEDIATRIC HOSPITAL II BIOCHEMICAL ASPECTS. Hertrampf E, Heresi G., Saitua M.T., Fuentes A. & R. Uauy. INTA-CHILE

A nutrition survey including biochemical and immunologic indicators was performed to establish the prevalence of malnutrition in hospitalized pediatric patients. Serum albumin levels & hematocrit were determined by micromethod expressing results as % of the mean normal level for age. Cellular immunity was evaluated by skin tests to PPD and Candida Albicans. One hundred and sixty patients (age range 2 months to 16 years) were studied. Low serum albumin was found in 14% of all patients, in 7% of the medical and 28% of the surgical group. A negative relationship was found between length of stay and albumin levels. Normal albumin was found in 95% of patients with low W/H. Low hematocrit for age was found in 28% of all patients with a higher prevalence in medical patients (39% vs 18%). Infants studied had rates of low Hto comparable to the normal population, older children differed showing higher rates. A scarr as evidence of BCG was found in 82% of all cases, 34% of which were PPD+. Skin test for candida were + in 32% of all patients. One or more positive skin tests were found in 42%, both test were negative in 48%. An important age related decrease in % positive for both tests was observed. No association was found relating albumin, W/H and skin tests. But a significant relationship was observed relating Arm Muscle Area to skin tests. These results suggest that patients present predominantly marasmus and some mild Kwashiorkor protein energy malnutrition. A high rate of altered cell mediated immunity was found amongst the patients studied.

69

NUTRITIVE VALUE OF WHEAT FLOUR SUPPLEMENTED WITH SWEET LUPINE (*L. albus* var. *multolupa*). Digna Ballester and Enrique Yanez. INTA. University of Chile. Casilla 15138, Santiago 11. CHILE.

Genetic varieties of sweet lupine with low alkaloid content are being developed in Chile. These legumes constitute an interesting source of protein for human feeding. In this investigation the chemical composition and biological quality of lupine flour, measured as PER in the rat, were determined. The effect of supplementation upon the biological quality of wheat flour with 5, 10, 15 and 20% of lupine was also studied. Lupine flour contained 36.4 % protein (Nx6.25), 11.5 % lipids and 12% crude fiber. PER was 1.13 compared with 2.64 for casein, used as a reference standard. On supplementation wheat flour improved the quantity and quality of its protein. The protein content increased from 9.3% to 13.7% with 20% of lupine and PER from 0.70 to 1.21, 1.33, 1.65 and 1.84 for the 5, 10, 15 and 20% lupine levels respectively. These results support the possibility of increasing the biological value of wheat by supplementation with lupine protein, thus permitting the improvement of wheat-based diets consumed by large segments of human population.

70

METABOLIC BALANCE STUDIES IN LBW INFANTS FED FOUR DIFFERENT FORMULAS. I) FAT ABSORPTION. Calvo E., Cozzarin A., Gnazzo N., Boccacio C. and C'Donell A.M. CESNI (Center for Studies on Infant Nutrition) and H.M.I.R. Sarada. Buenos Aires. Argentina.

Three formulas currently available in Argentina (Vital Infantil, Nan and S26) and an experimental one were evaluated for the absorption of their main nutrients in LBW infants (weight at the time of balance studies X: 2244±986g., ranging from 1015 to 6040g.) during 72 hs. metabolic balance periods. Fat in "Vital inf." is 60% butterfat and 40% cottonseed oil, in "Nan" is 80% butterfat and 20% corn oil, in S26 is a blend of MCT 40%, corn oil 40%, coconut oil 20%.

	VITAL INF.	NAN	S26	3242
No. of Balances	8	7	6	12
Fat intake/Kg/d	7.2±2.0	7.2±0.9	7.0±1.0	7.3±0.5
Ret %	82.9±9.2	86.6±7.7	75.3±7.7	90.2±2.7

Only "S26" differed statistically from "3242" ( $p < 0.05$ ). A wide variability in absorption coefficients was observed, ranging from 62.5 to 95, except with the formula 3242 which were more uniform. No correlation was clearly found between fat fecal losses and postnatal age. In some cases such steathorrhoea can represent fecal losses of about 12% of energy intake. Manipulation of food fat could be recommended in those babies where important fecal losses are suspected.