

Effect of dietary supplementation on lymphocytes subsets and liver-related variables in hospitalised patients with anorexia nervosa

S. Gómez¹, L. E. Díaz¹, E. Nova¹, G. Morandé² and A. Marcos¹

¹Departamento de Nutrición y Bromatología, Instituto del Frío (CSIC) 28040 Madrid, Spain and

²Servicio de Psiquiatría, Hospital Niño Jesús, 28009 Madrid, Spain

Medical complications are common and often serious in patients with eating disorders such as anorexia nervosa (AN)⁽¹⁾. Several studies have described an increase in serum liver enzymes in severely-malnourished patients who are affected by AN⁽²⁾ and in the refeeding phase of therapeutic intervention^(3,4). It is also considered that, the lymphocyte subset ratios CD4:CD8 and CD2:CD19 are indexes of malnutrition⁽⁵⁾. Thus, a study was carried out that aimed to evaluate the effect of a dietary supplement (Pentadrink fibra; Nutricia SA, Madrid, Spain; energy density 6.3 kJ/ml) on some liver-related and immunological variables. The supplement was used in order to increase the energy content of the refeeding diet administered to the patients with AN during their admission to the hospital. Sixty patients with AN were divided into three groups: (1) without oral supplementation (ANWP; *n* 21); (2) with 200 ml oral supplementation (ANP; *n* 19); (3) with 400 ml oral supplementation (ANPP; *n* 19). The results were compared with those obtained from a control group matched for gender, age and socio-economic status. Energy intake and energy profile were evaluated for each group. Liver-related variables (glutamic-oxaloacetic transaminase (GOT), glutamic-pyruvic transaminase (GPT), γ -glutamyltransferase (GGT), alkaline phosphatase (AP) and bilirubin) and immunological variables (CD4+, CD8+, CD2+, CD19+ cell numbers and ratios) were determined. All variables were assessed on admission to (time 0) and discharge from hospital (time 1).

The mean initial energy intake (kJ/d) of the patients was 6145 (SD 560), 6947 (SD 594), 11520 (SD 878) in the ANWP, ANP and ANPP groups respectively. At discharge the energy intake (kJ/d) was: ANWP, 12218 (SD 1150); ANP, 13188 (SD 1283); ANPP, 14154 (SD 1317). CD8+ in ANPP, CD2+ in ANP and ANPP, and CD19+ in all three groups showed a significant decrease during the study. These changes led to an increase in the CD2:CD19; however, the increase was only significant in the ANPP group (see Figure). Both CD4:CD8 and CD2:CD19 were always within normal values. Although GOT and AP showed a significant increase in the ANPP group, the levels were also maintained within normal values. The results show that the inclusion of the energy supplement in the refeeding therapy of patients with AN does not produce adverse effects on the liver enzymes or immunological variables measured. However, special care should be taken with those patients with AN at risk of suffering hepatic disease, particularly if the treatment is prolonged.

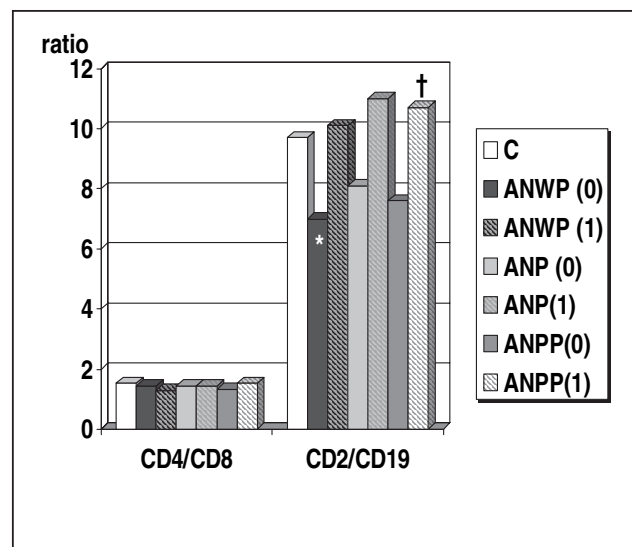


Figure. Mean values were significantly different from those for the controls (C) (Student's *t* test): **P*<0.05. Mean values were significantly different from those for time 1 (Student's *t* test): †*P*<0.05. (0), admission to hospital; (1), discharge from hospital.

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