Abstract

Background: assess whether the current protein intake recommendations may improve the biochemical parameters of critical patients receiving parenteral nutrition. Methods: longitudinal study with three evaluations made (during the first 72 hours, on the 7th and the 14th days of PN). The following tests were applied: albumin, C-reactive protein, prealbumin, total cholesterol, HDL, triglycerides, lymphocytes, and glutathione peroxidase. The severity was determined by SOFA. The statistical analysis included the Spearman and Mann-Whitney tests, as well as ANOVA (analysis of variance). Results: among the 53 patients evaluated, 20 (37.74%) died. The mean calorie was 24.68 ± 9.78 kcal/kg (beginning of PN), 26.49 ± 8.89 kcal/kg (3rd to 7th days of PN), and 30.9 ± 12.19 kcal/kg (7th to 14th days of PN). The mean protein was 1.19 ± 0.44 g/kcal/kg (first 72 hours of PN), 1.29 ± 0.44 g/kcal/kg (3rd to 7th days of PN) and 1.49 ± 0.69 g/kcal/kg (7th to 14th days of PN). Prealbumin, albumin, total cholesterol and HDL were below the reference values, while the CRP levels were high. Throughout the three evaluation times, there was no a significant improvement on the levels of laboratory examinations. A strong and negative correlation was found between SOFA and prealbumin ($r = -0.64$, $p = 0.05$). Conclusions: the protein offer, according to the traditional recommendations, was not enough to improve the biochemical parameters of critical patients undergoing parenteral nutrition.

Keywords

Parenteral nutrition, Intensive care unit, Protein.