Abstract

Objective: Assess the hepatoprotective effect of Taurine (Tau) in cases of hepatic cholestasis induced by Total Parenteral Nutrition (TPN). Methods: We describe a retrospective series of 54 patients who received TPN, in which cholestasis was detected at an (Intermediate) point that separates the duration of TPN into 2 Phases. From this moment —Phase 2— on, and according to clinical criteria, some patients (Group A, n = 27) received amino acids with Tau (22.41 ± 3.57 mg/kg/day)(Tauramin®), while the rest (Group B, n = 27) received the standard solution without Tau. The mean TPN durations were 39.2 ± 17.1 and 36.4 ± 18.1 days respectively, with the Intermediate points on days 19.56 ± 10.51 and 17.89 ± 11.14. They all received diets that were homogeneous in terms of kcal and macronutrients. In Phase 2, 21 patients from Group A received structured lipids (SMOFlipid®); while 20 from Group B received soy MCT/LCT [Medium Chain Triglycerides/Long Chain Triglycerides] (physical or structured mixture). In a retrospective study, differences could not be avoided. The analytical parameters from three periods (Initial, Intermediate, and Final) were obtained from Nutridata® and Servolab®. We compared interperiod values using the Wilcoxon test SPSS® (p < 0.05). Results: After introducing Taurine AST, ALT, and GGT were significantly reduced; Bilirubin was also reduced, but not significantly. The values obtained for GGT in Group A were (Mean( )/median): Initial 48.6 (23.1)/46; Intermediate 473.7 (276.2)/438, and Final 328.9 (190.4)/305. We stress that the mean GGT value is reduced by 30.56% after adding Taurine, while in its absence all parameters are elevated, and mean GGT increases 45.36%. Conclusion: These results show Taurine’s hepatoprotective effect and support its use in cases of TPN-induced cholestasis. We acknowledge the possibility that the differences between SMOF and the MCT/LCT mixtures also may have influenced the results in a combined effect with taurine.

Keywords

Parenteral nutrition, Cholestasis, Taurine, Liver, Fat emulsions intravenous.