

# LIPID EMULSION BASED EXCLUSIVELY ON OMEGA-3 FATTY ACIDS FOR ABNORMAL LIVER FUNCTIONING ASSOCIATED WITH TOTAL PARENTERAL NUTRITION AT HOME

M. Díaz González, A. Pascual Carrasco, M. Mateo García, E. Climent Grana, V. González-Sánchez, A.L. Abad González, J.J. Campuzano Jara, A. Javaloyes Tormo, R. Gandía Martínez, J.J. Selva Otaolaurruchi  
Pharmacy Department and Endocrinology Department Alicante Hospital, (Alicante, Spain)

## Background

Abnormal liver functioning is associated to long-term treatment with total parenteral nutrition (TPN).

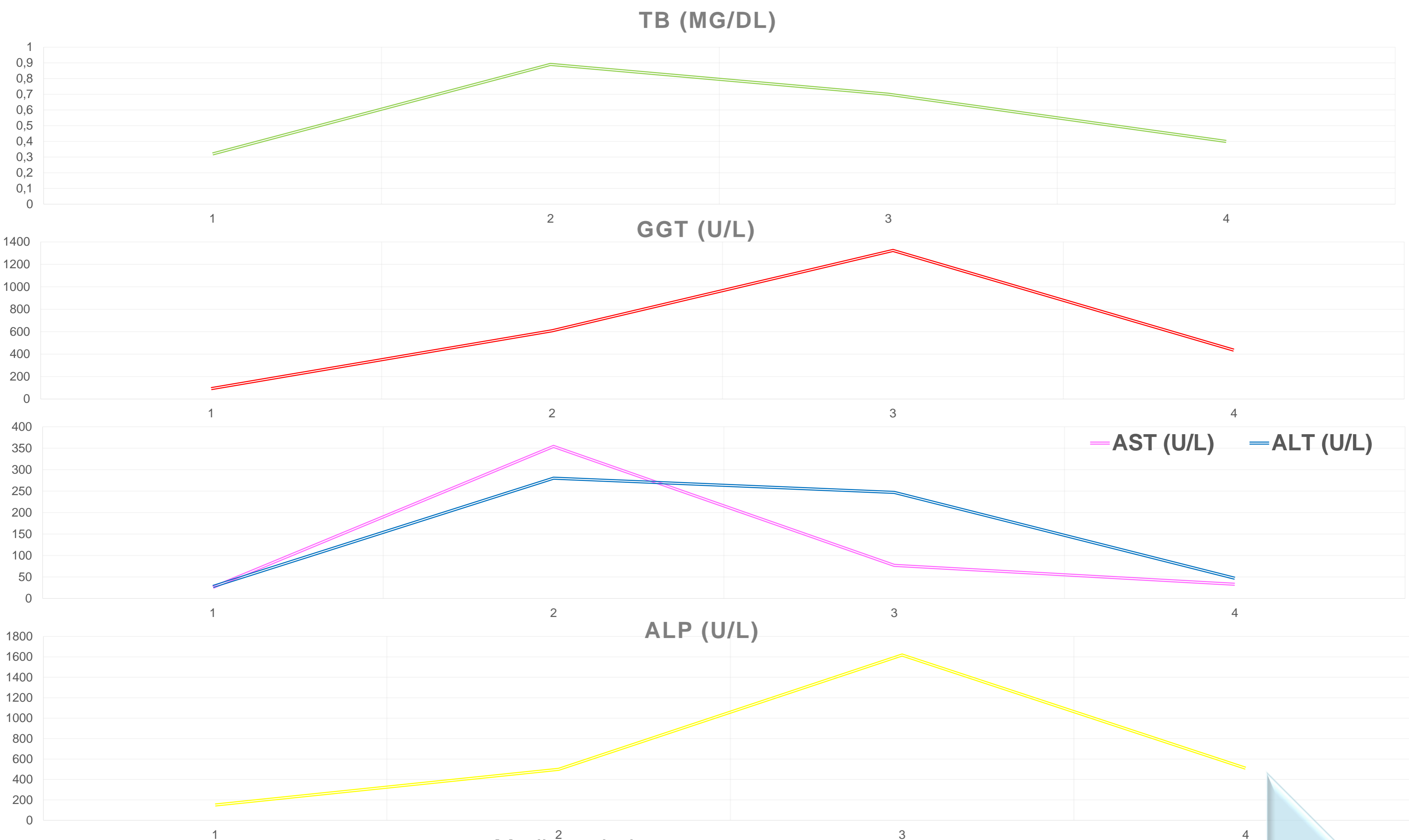
## Purpose

Assessing the influence of a lipidemulsion based exclusively on omega-3 fatty acids on the progress of abnormal liver functioning in a patient with long-term TPN.

## Material and methods

Descriptive retrospective study regarding a case of parenteral nutrition: 52-year-old woman with cyclic TPN at home due to an intestinal obstruction secondary to a recurrent appendix tumour. External gallbladder flush. Impossibility of oral intake. The lipid input was based on a solution based exclusively on omega-3 fatty acids. Clinical, analytical and nutritional variables were gathered.

## Results



Medium-chain triglycerides, soy oil and AG-omega3 (1g/kg/day), ratio of carbohydrates-lipids 60:40, and 15 g nitrogen/day

Medium-chain triglycerides, soy oil, olive oil and omega-3 fatty acids. The nitrogenated solution was also replaced with a taurine-enriched solution

The lipid input was reduced, its administration being eventually suspended.

Exclusively on omega-3 fatty acids (1g/kg/day)

The patient tolerated the treatment and no adverse effects were observed in relation to fish oil, such as thrombocytopenia or INR increases. The deficit in essential fatty acids was monitored, their values being found to be within normal limits. The clinical and analytical parameters remained stable until the patient died due to the progression of her condition

## Conclusion

The administration of this formulation for 7 months as the only lipid formulation was effective and well tolerated by the patient and no deficit in essential fatty acids was detected.