

ANALYSIS OF THE REGIMENS ESTABLISHED AT THE PHARMACY SERVICE FOR TOTAL PARENTERAL NUTRITION AND THE USE OF GLUTAMINE AS SOURCE OF NITROGEN

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A16 - Other
alimentary tract and
metabolism products



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Background

The recommendations for the appropriate composition of total parenteral nutrition (TPN) for adult patients with different pathologies have been changing over the years as new studies are conducted, tending to be higher in protein and lower in total kilocalories.

Different guidelines such as the European and the American Society of Parenteral and Enteral Nutrition (ESPEN and ASPEN) or the Canadian Clinical Practice Guidelines are referents on the subject.

Purpose

To analyse the accuracy of the regimens established at the Pharmacy Service for TPN in 2011 regarding amount of protein, and also to evaluate whether glutamine is being used as supplementation or as a source of nitrogen to meet the recommendations.

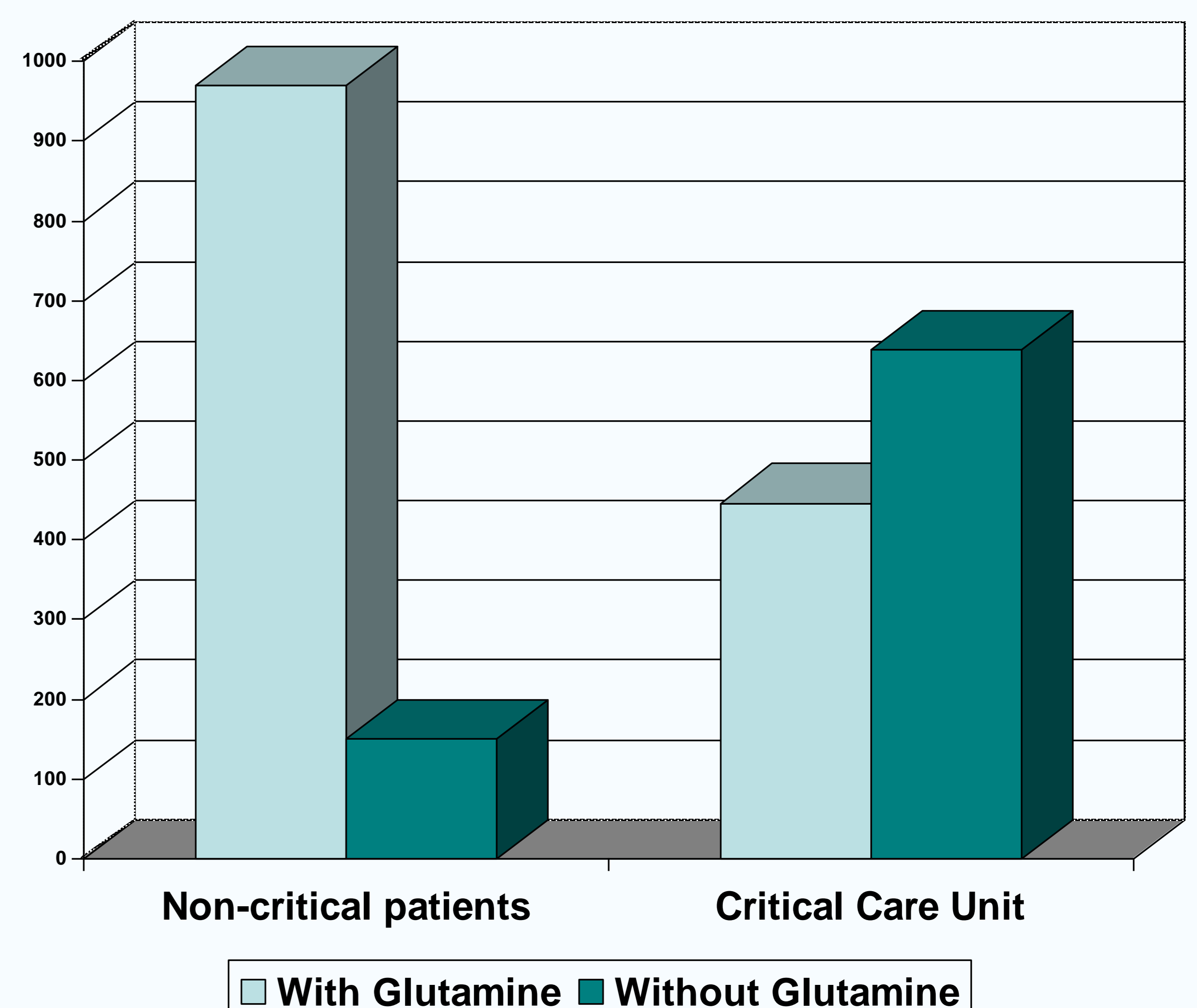
Material and methods

A retrospective study covering the period from January 2018 to August 2018 was conducted in a University Hospital evaluating the prescriptions of TPN and whether they were supplemented with glutamine or not. Data were collected from an Acces® base designed for the elaboration of the TPN bags. Then, a review of the total amount of nitrogen in the regimens was conducted too.

Results

- Total prescriptions of TPN: **2.206**
 - TPN elaborated for non-critical patients: **1121**
 - Supplemented with glutamine: **970 (86,7%)**
 - TPN elaborated for the Critical Care Unit: **1085**
 - Supplemented with glutamine: **446 (41,1%)**

Without supplementation, the maximum amount of Nitrogen available in the dosage regimes is 14g and with supplementation it can get up to 18g.



Conclusion

Since the recommendations of total protein are higher (1,2–2g nitrogen/kg/day ASPEN2016) than some years ago (1,3–1,5g nitrogen/kg/day ESPEN2009) it seems clear that the available regimens of TPN at the Pharmacy Service are outdated and glutamine is being used not only as supplementation but also as source of Nitrogen.

At the light of the results new products high in Nitrogen (16g and 18g) and new regimens were proposed to limit the use of glutamine only as supplementation and improve the adherence to the Guidelines.



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