

# APPLICATION OF THE STABILITY CRITERIA OF THE PRENTERAL NUTRITION SOLUTION “ALL IN ONE” IN PEDIATRICS



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## BACKGROUND

The use of parenteral nutrition solutions (SPN) “all in one” suppose a reduction of the problem which involves the instability of the lipid emulsion, due to the addition of the different nutrients of the mixture. However, it should be necessary to overlook the concentrations of the nutrients which compound the mixture.

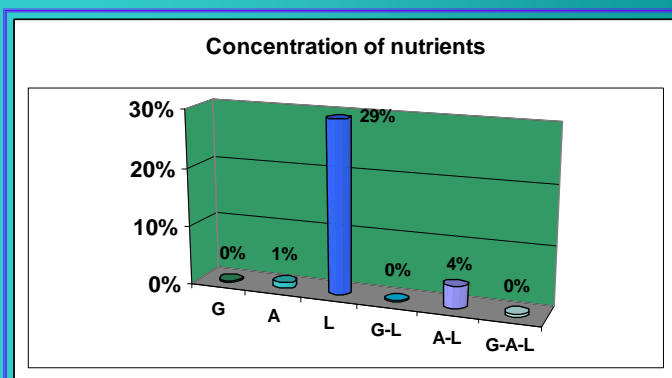
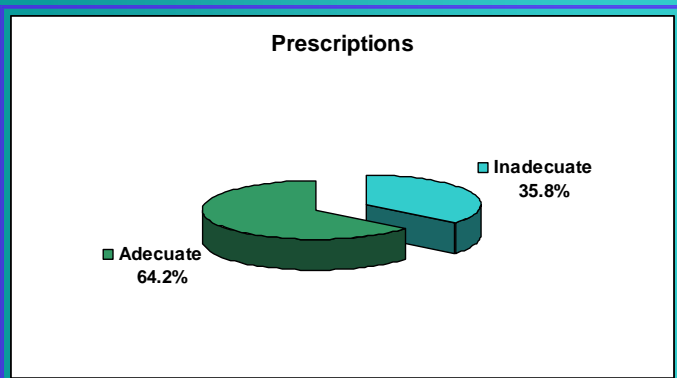
## PURPOSE

The objective is to evaluate the adjustment of the requirement of the SPN “all in one” in pediatrics by the pharmacist.

## MATERIAL AND METHODS

A prospective research has been realized (January-June 2011). The prescriptions of SPN in children younger than 1 year were reviewed. Later, an evaluation was made according to the stability criteria of the SPN “all in one” developed by the Spanish Society of Hospital Pharmacy (SSHP). The requirements established for the maintenance of the stability are a concentration  $\geq 5\%$  glucose,  $\geq 2,5\%$  amino and  $\geq 1,5\%$  lipids. The pharmacist made the necessary adjustments according to the requirements of each patient and the criteria according to the SSHP.

## RESULTS



50 pediatric patients received SPN. The average of the patients was 1.76 months and an average weight of 3,97 Kg. The average of the volume of them was 300 ml. We observed that 64,2% of the SPN prescribed achieved the requirements of stability. In the 35,8% of the prescriptions we detected inadequate concentrations of the nutrients, specifically, low concentrations of: glucose (0,2%), amino (1%), lipids (29,4%), glucose-lipids (0,2%), amino-lipids (3,8%) and glucose-amino-lipids (0,4%). The pharmacist made the necessary adjustments in the 30% of prescriptions of SPN due to the change of the content of the nutrients and/or volume.

## CONCLUSIONS

The SPN “all in one” is the ideal form of administration in pediatrics, as well as the evaluation and adjustment of the composition of the nutrients by the pharmacist according to the stability criteria established, so this would avoid mistakes in 35% of the prescriptions of SPN.