

# INDIVIDUAL PARENTERAL NUTRITION: PHARMACIST WORK AS A MULTIDISCIPLINARY TEAM MEMBER

CP-177



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## BACKGROUND

Parenteral nutrition (PN) allows provide the nutrients required in any pathology. However, it is a technique with complications and represents a substantial health care burden and a considerable economic cost.



## PURPOSE

To describe the contribution of a pharmacist in prescription of PN and to analyze the degree of acceptance by the prescribing doctor.

## MATERIAL AND METHODS

### DESIGN

- ✓ Prospective study
- ✓ Patients with total parenteral nutrition support (PNS)
- ✓ March to April 2016
- ✓ In a tertiary care hospital

The prescriptions included were received via the form "Treatment Parenteral Nutrition" from the medical record program Selene® and were managed through the parenteral nutrition program Kabisoft®.

### DATA BASE

- Demographical data (aged and sex)
- Type PN (individualized adults diet, notarized diet, marketed tricameral diet or individualized pediatric diet)
- Service of the prescribing doctor,
- Modifications of grams of N, lipids, HC, Na, K, Ca, Mg, P, Cl, Acetate (Ac), supply of vitamins, trace elements, insulin intake, grams of glutamine, volume
- Acceptance of the amendment.

Modifications were consulted via telephone with the prescribing doctor.



All amendments were accepted by the prescribing doctor

## RESULTS

Total: **633 PNs** were prescribed, corresponding to 69 patients and in 39(6.2%) of them at least one modification was required.

The PNs modified belonged :

- **18 patients**
- median age of **54 years** (interquartile range:38.5-68)
- **66.7% men**

### Prescribers

- 59% intensive care
- 33.3% endocrinology
- Rest: pediatrics and neonatal unit

### Type PN

- 32 (82.0%) individualized for adults
- 2 (5.1%) protocolised for patients with renal failure
- 1 (2.6%) was protocolised for degree of stress
- 3 (7.7%) were pediatric PNs
- 1 (2.6%) was a marketed tricameral PN

### Modifications

A total of **69 amendments**

- 23.2% lipid
- 18.8% HC
- 15.9% in volume
- 8.7% N
- 4.3 % glutamine
- 4.3% insulin
- vitamins and trace elements 2.9%
- 8.7% Na, Ca and P
- 2.9%, Mg, Cl
- 1.4% Ac

- No changes were made in the contributions of K

## CONCLUSIONS

- ❖ The largest number of modifications corresponded with the **grams of lipids, N, HC and volume**.
- ❖ The PNs prescribed by the **intensive care** unit needed more changes.
- ❖ Knowing that the **ratio of non-protein calories per gram of N** represents an objective and quantifiable amount for the use of protein in metabolism, it is important to highlight the role of the pharmacist in controlling this ratio, especially in critically ill patients, being one of the parameters that mostly goes unnoticed by the prescribing doctors.
- ❖ The **integration of a pharmacist** in the prescription of PNs provides more security and increases the adequacy of the PN to the patient's needs.