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BACKGROUND

Traditionally, the functions of the clinical pharmacist in the Intensive Care Unit (ICU) of our hospital were based on pharmaceutical interventions (PIs) concerning parenteral nutrition (PN), the preparation of these formulas and checking that the composition was adapted to the nutritional requirements and the clinical situation of the patient. Nevertheless, the same pharmacist can also collaborate with the ICU staff (physicians or nurses) in the optimization of pharmacological treatment of critically ill patients.

PURPOSE

To describe the number and type of PIs upon medical prescriptions of critical care patients and to assess the impact of these PIs according to the degree of acceptance by ICU staff.

MATERIALS AND METHODS

We carried out a prospective study between 1st of April and 31st of May 2018 in an ICU of 18 beds of a tertiary teaching hospital. Inclusion criteria: ICU patients who received PN during the stay. Variables included: type of PI (made after daily review of the nutrition and drugs prescriptions and were communicated verbally to the ICU staff), demographics, acceptance by ICU staff.

RESULTS

During the study period:

232 patients were admitted to the ICU

30 (12,9%) of which received PN (mean age 62, range 13-93; 32% women; mean length of stay 3 days, range 1-36)

A total of 134 PIs were recorded

Pharmaceutical Interventions	%
PIs related to PN prescriptions (27,6% of this kind of PI were modifications of insulin, 14,5% were modifications of electrolytes)	56,7%
Enteral nutrition PIs	16,4%
Administration of drugs via the nasogastric tube	7,5%
Giving information about drugs administration	7,5%
Stability of intravenous mixtures	4,5%
Conciliation of medication	3%
Suggestions for changing a drug for another (due to inefficiency)	3%
Maximum dose alerts	1,5%

83% of PIs were accepted by ICU staff.

CONCLUSIONS

More than 4 PIs were performed per patient and the percentage of rejected PIs was very low. Although the main task of our clinical pharmacist is focused on clinical nutrition, this study demonstrates the role and importance of this professional incorporated into ICU multidisciplinary team since PIs contribute to prevent medication errors and to improve effectiveness and safety of the total pharmacological treatment in critically ill patients.



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