The impact of COVID-19 on parenteral nutrition practices

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Background and aims

The present study was designed to evaluate the impact of the viral epidemic on the management and prescription of parenteral nutrition (PN). The actual epidemic caused by Coronavirus SARS-coV-2 pointed out that, although it is primarily a respiratory disease, Covid-19 patients are hypermetabolic and hypercatabolic during the acute phase. In the most severe forms, they present the pro-inflammatory "*Cytokine Storm*" responsible for multiple-organ and system failure with gastrointestinal's effects. A high prevalence of malnutrition highlighted the need for an active monitoring strategy of the nutritional status.

Methods

The epidemiological analysis of the prescription data of 2018, 2019, 2020 patients' AULSS 3 Hospital Pharmacy Service was performed by medical charts' consultation and the definition of a data collection model. The data concerning indications, therapy's duration, PN formulations required, and the outcomes were collected considering **1074 patients**.

Results

Based on the experiments, 2018 and 2019's results showed that the prevalence of patients in nutrition therapy was affected by gastrointestinal diseases and post-operative hospitalization. Differently, 2020 highlighted a remarkable increase of intensive care patients due to the Covid-19 outbreak.
As a consequence, at the start of the pandemic, there was a substantial increase in standardized total parenteral nutrition (TPN), a corresponding reduction of individualized TPN, and an intensification in high-calorie artificial nutrition.

Conclusions

This research confirmed that COVID-19 disease determined a significant variation of the nutrition support management in 2020 versus 2018-2019, according to indications and mixtures' types of parenteral nutrition.