

Adequate parenteral nutritional therapy in patients with coronavirus disease (COVID-19)

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Background:

Adequate nutritional therapy in patients with coronavirus disease (COVID-19) helps metabolic regulation as well as immune response.

Objective:

To describe how the parenteral nutrition prescription was adapted to the nutrition guidelines in patients with COVID-19 disease who require nutritional support disease in critical care setting.

Material and methods:

- Retrospective observational study of patients with total parenteral nutrition (TPN) in ICU setting between March and May 2020.
- For each patient, energy and protein requirements were calculated
- The degree of adaptation of the nutritional support prescribed to international guidelines was analyzed; adaptation was considered if the percentage of total energy and protein requirements was within 80-120%.

Results:

Sex	10 men, 3 women
Median age	60 years (50-79)
Median weight	85.5 Kg (109-72)
Reason for starting TPN	7 NE intolerance, 4 paralytic ileus, 1 pancreatitis, 1 ischemic colitis
Reason for ending TPN	13 good tolerance to NE
Complementary EN	8 patients
Complications due to TPN	5 patients suffered catheter bacteremia

- Median number of days in the critical unit: 38 days (12-73).
- Median number of days with TPN: 13 days (2-53).
- Median percentage of days with TPN (compared to the total days spent in the critical care unit): 36.8% (7.1-72.6).
- Median calculated energy requirements were 1800 Kcal/day (1150-2137)
- Median protein requirements per day: 130.5 grams (105-163.5).

A total of 28 prescriptions were recorded.

- Median total Kcal prescribed/day: 1827 Kcal (1035-2475)
- Median protein intake: 100 grams (57-147.5).

18 (64.3%) total daily Kcal prescriptions and 9 (32%) of the protein prescriptions were adapted to the guidelines.

Conclusions:

We found low adaptation of the prescriptions to the guidelines in relation to grams of protein (kidney involvement could be responsible), although the total energy requirements were adapted.

The high rate of catheter bacteremia is striking.

