

APPROPRIATENESS OF NUTRITIONAL SUPPORT FOR PATIENTS WITH INVASIVE MECHANICAL VENTILATION WITH COVID-19 DISEASE REQUIRING INTENSIVE CARE

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Background and importance:

Nutritional management in Intensive Care Unit (ICU) patients COVID-19 can influence their recovery. Several guides about nutritional support had appeared last months.

Aim and objectives:

To assess the appropriateness of nutritional management for patients COVID-19 in ICU and invasive mechanical ventilation (IMV) through the compliance with recommendations of Spanish Society for Intensive Care (SEMICYUC), the European Society for Clinical Nutrition and Metabolism (ESPEN) and the American Society for Parenteral and Enteral Nutrition (ASPEN).

Material and methods:

Observational retrospective study (02/03/2020-13/05/2020)

Clinical variables:

- Days until start of artificial nutrition (AN)
- Duration and type of enteral (EN) or parenteral nutrition (PN)
- Body mass index (BMI)
- Calorie intake/kilogram/day
- Protein/kilogram/day on the first and fifth day,
- Increasing in markers of hepatic cholestasis when duration of NP was >14 days,
- Length of ICU stay
- Exitus.

Demographic variables:

- Age
- Sex

41 patients

Results:

59,6±12,2 years
75.6%(n=31) men

Type of EN

- 17%(n=7) started with EN:
- hypercaloric/hyperproteic(n=3)
- normocaloric/normoproteic(n=4)

BMI

- 34,1%(n=14) obese:
- 21%(n=3) were morbidly obese (average of BMI=44,86±6,4).

Calorie intake/kilogram/day:

- 1º day: 21,9±7,5
- 5º day: 23,5±9,8

Protein/kilogram/day

- 1º day: 1,35±0,6
- 5º day: 1,9±3,2

Clinical variables

Increasing in markers of hepatic cholestasis when duration of NP was >14 days:

- 20 people
- alkaline phosphatase increased: 11 patients during 13(3-38) days.
- Direct bilirubin was elevated for everyone.

PN

At any moment during hospital stay, 97,5% of patients had PN with a median of 14,5(2-52) days.

Exitus:

- 34 patients
- 26 remained with PN at the day of exitus.

Conclusion and relevance:

During the first day, AN accomplished the recommendations (20 Kcal/Kg/day and 1.2-1.3 g protein/Kg/day). At fifth day, total kilocalories did not achieve recommended values (25 Kcal/Kg/day), although proteins/kg/day were higher than the guides (1.5 Kcal/Kg/day). The reason might be the increasing protein request of these patients.

High dose of muscle relaxants could prevent a proper functionality of digestive tube and low use of EN.

It could be important to debate about the suitability of the maintenance of AN for patients with a short term exitus.