Feeding the Patient with Obesity in the Critical Care Setting:

Discussion and Key Recommendations

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Feeding the Patient with Obesity in the Critical Care Setting Presentation*

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Obesity and Critical Illness

Key Messages

- Many in the US are obese, thus many ICU patients will be obese, and have the associated comorbidities such as diabetes, heart disease, dyslipidemia, hypertension, etc.
- Sarcopenic obesity is the confluence of aging and obesity; it worsens quality of life and physical function in patients with obesity, and presents as a measurable loss of muscle mass associated with reduced muscle strength (handgrip) and performance (gait speed). The prevalence is unclear in part due to varied measurement approaches.
- Some clinicians may have biases against patients with obesity and believe these patients do not need nutrition support. It is important to educate clinicians that patients with obesity do not have adequate stores of micronutrients and protein to sustain their nutritional status, particularly in critical illness and inflammation.
- People with obesity can achieve glucose control, hyperlipidemia management, and reduced risk of infection though appropriate monitoring along with medical and nutrition therapy.

Discussion Questions

How do we address the ongoing issue of sarcopenic obesity?

Use standardized and validated tools to consistently measure lean body mass in the ICU patient to assess and re-assess. Use the nutrition care pathway for appropriate assessment and documentation.[1]

What weight should be used to calculate energy and protein requirements?

Suggest using 2016 SCCM/ASPEN Critical Care Guidelines: "For all classes of obesity, the goal of the EN regimen should not exceed 65%–70% of target energy requirements as measured by indirect calorimetry (IC). If IC is unavailable, we suggest using the weight-based equation 11–14 kcal/kg actual body weight per day for patients with BMI in the range of 30–50 and 22–25 kcal/kg ideal body weight per day for patients with BMI >50. We suggest that protein should be provided in a range from 2.0 g/kg ideal body weight per day for patients with BMI of 30–40 up to 2.5 g/kg ideal body weight per day for patients with BMI ≥40."[2]

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Additional Resources

* Presentation recording is available at nutritioncare.org/ObesityinCriticalCare.

Program Fact Sheet: Feeding the Patient with Obesity in the Critical Care Setting: A Case-Based Application.

Feeding the Patient with Obesity in the Critical Care Setting

Key Messages

- Use IC and try to provide 65-70% energy requirements. If IC is unavailable, we suggest using the weight-based equation 11–14 kcal/kg actual body weight per day for patients with BMI in the range of 30–50 and 22–25 kcal/kg ideal body weight per day for patients with BMI >50.[2]
- Lean body mass and function predict survival, but validated measurement is in early stages of standardization.
- Provide adequate protein according to SCCM/ASPEN guidelines.
- Initiate enteral nutrition 24–48 hours of admission to the ICU using an enteral formula with a low caloric density and reduced non-protein calorie (NPC) to nitrogen ratio.
- Parenteral nutrition can be added to supplement EN when EN cannot be advanced to goal.
- Optimize mobility plan to increase muscle mass, function, and ambulation.

Discussion Questions

Do you evaluate sarcopenic obesity in the ICU and, if so, how?

Sarcopenic obesity can be measured using existing CT imaging. Need to consistently review these imaging records to assess change in lean body mass. Assessing functional capacity through knowing pre-existing exercise capacity is also important to know, such as asking family for functional capacity history.

Can you share any tips to implement a successful catch-up program using volume-based feedings in the ICU?

Empowering the nurses to provide the nutrition and catching up with enteral feedings using a volume-based approach has been very successful in nutrient provision for these patients.

Critical Care Nutrition in the Obese Patient: Transitions of Care

Key Messages

- Patients with BMI ≥ 30 may continue to benefit from hypocaloric, high protein feedings.
- Transition of care to different clinicians or caregivers is optimized by communication of specialty nutrition support regimens, education of those clinicians to provide adequate protein, and documentation.
- Assess insurance coverage for EN, PN, oral supplements and protein modulars, particularly in relation to reduced NPC to nitrogen regimens.
- Avoid excessive weight loss, promote adequate protein intake, and repeat estimated needs calculation.
- Include family and caregivers in the nutrition care plan and communication.

Discussion Questions

What are some tips on optimizing nutrition post-discharge?

In the community it is key to empower the patient and family by educating them on the importance of nutrition for their recovery from illness. Communication with home health agencies is important to meet nutritional goals, especially using protein modulars and oral nutrition supplements to meet the protein needs.

References

1. ASPEN. A.S.P.E.N. Adult Nutrition Care Pathway. 2015. https://www.nutritioncare.org/uploadedFiles/Documents/Malnutrition/ASPEN_Adult_Nutrition_Care_Pathway.pdf. Accessed October 1, 2021.
2. McClave SA, Taylor BE, Martindale RG, et al. Guidelines for the provision and assessment of nutrition support therapy in the adult critically ill patient: Society of Critical Care Medicine (SCCM) and American Society for Parenteral and Enteral Nutrition (A.S.P.E.N.). *JPEN J Parenter Enteral Nutr*. 2016;40(2):159-211.

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