Category :**Nutritional support**

A162 - ***The effect of hypocaloric-high protein feeding critically ill adult patients with obesity: a systematic review and meta-analysis.***

A Alsuwaylihi [1] ; P Skorepa [2] ; Y Alhindi [3] ; A Avery [4] ; J Musson [4]

[1]University of Nottingham, Nottingham Digestive Diseases Centre, Division of Translational Medical Sciences, School of Medicine, University of Nottingham, Queen's Medical Centre, Nottingham, UK, Nottingham, United Kingdom, [2]Faculty of Military HealthSciences, University of Defence, Trebesska 1575, Department of Military Internal Medicine and Military Hygiene, Hradec Kralove, 500 02, Czech Republic, [3]University of Nottingham, Clinical, Metabolic and Molecular Physiology, MRC-Versus Arthritis Centre for Musculoskeletal Ageing Research, Nottingham, United Kingdom, [4]University of Nottingham, School of Biosciences, Division of Food, Nutrition & Dietetics, Nottingham, United Kingdom

Introduction:

Use of a hypocaloric high protein feeding approach for critically ill obese patients has been recommended by a number of organisations and institutes with the goal being to avoid overfeeding and its complications that may worsen patients' overall status. The objective of this review is to assess the efficacy of hypocaloric-high protein feeding protocol on mortality and ventilator-associated pneumonia (VAP) incidences among critically ill obese patients.

Methods:

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement (PRISMA) methodology was used to search PubMed, EMBASE and MIDLINE databases. All papers published up to up to July 2021 with mortality and VAP incidence as primary outcomes were retrieved. The secondary outcomes were average daily caloric intake and length of intensive care unit (ICU) stay.

Results:

No significant reduction in the mortality incidence when the hypocaloric-high protein feeding approach was used (RR 0.74, CI 0.35 to 1.56, P= 0.43), similarly, no significant reduction in VAP incidence were observed when the hypocaloric-high protein feeding approach was used (RR 0.84, CI 0.50 to 1.41, P= 0.52). Additionally, no significant reduction in the mean ICU days when the hypocaloric-high protein feeding approach was used (MD -0.82 days, CI -5.90 to 4.27, P=0.75), but there was a significant reduction in mean daily caloric intake in the hypocaloric-high protein feeding approach groups (MD -4.80 kcal/kg/day, CI -6.99 to -2.62, P<0.0001).

Conclusion:

This review did not indicate superiority of hypocaloric high protein feeding approach to eucaloric or standard feeding approach in regards of mortality, VAP incidence and length of ICU stay. There was a significant reduction in daily caloric between hypocaloric high protein feeding compared with eucaloric or standard feeding approach, with no benefits to the outcomes.