

POSTER 1

The Obesity Paradox in Critical Care: A Systematic Review

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Background

Obesity has trebled worldwide since 1975 (WHO 2020) and is a major risk factor for chronic disease and premature death (Lewandowski 2011). It is now considered a major global public health problem (WHO 2020). It is estimated that at least 25% of patients in American intensive care units are obese (Alipour et al. 2019). Despite the health burden of being overweight, some studies have shown that obese patients fare as well, if not better than their non-obese counterparts in the intensive care setting (Gong 2016). This has been termed the ‘obesity paradox’ however the reasons remain unclear and some studies still doubt its existence at all (Papadimitriou-Olivergeris 2016).

Aims

To conduct a systematic review of the available literature on the impact of survival rates in critically ill patients.

Methods

A systematic electronic search of MEDLINE, EMBASE and Web of Science was conducted in May 2020. A hand search of the references of the included studies was also undertaken. Only studies in the English language were included.

Results

289 studies were reviewed by title and abstract, 217 were rejected based on title and 72 were rejected based on abstract. After duplicate studies were removed 13 studies were accepted. Statistical analysis was undertaken using RevMan 5.4 software developed by the Cochrane group. Obese critically ill patients had a lower mortality [OR 0.92 (95% CI 0.86-0.98) p-0.02] expressed through a random effects model.

Key messages

There was evidence for an obesity paradox in critical care. However, the reasons for this remain unclear and require further research. As BMI does not include any assessment of body morphology, including additional measures such as waist height ratio could provide further clarity on the obesity paradox.

