INPLASY PROTOCOL

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Corresponding author:
Hui-Bin Huang

hhba02922@btch.edu.cn

Author Affiliation:
Department of Critical Care Medicine, Beijing Tsinghua Changgung Hospital, School of Clinical Medicine, Tsinghua University

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Conflicts of interest:
The authors declare that they have no competing interests.

Energy delivery guided by indirect calorimetry in critically ill patients: a systematic review and meta-analysis

Huang, HB[1]; Duan, JY[2]; Zhou, H[3]; Xu, Y[4].

Review question / Objective: **We sought to investigate whether indirect Calorimetry guided energy delivery strategy in critically ill patients may be more effective to reduce short-term mortality and other clinical outcomes when compared with resting energy expenditure predictive equations.**
Condition being studied: **The research team comes from the Department of Critical Care Medicine of a tertiary hospital in China, and all the team members have perfect clinical experience in treatments of nebulized antibiotics. Moreover, our team members have published nearly 10 meta-analyses, which can guarantee the successful completion of the current research.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 November 2020 and was last updated on 19 November 2020 (registration number INPLASY2020110084).

INTRODUCTION

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perfect clinical experience in treatments of nebulized antibiotics. Moreover, our team members have published nearly 10 meta-analyses, which can guarantee the successful completion of the current research.

METHODS

Participant or population: Adult (≥18 years old) ICU patients.

Intervention: Critical adult patients (≥18 years) receiving calories guided by repeated IC (IC group).

Comparator: critical adult patients (≥18 years) receiving calories guided by a simple predictive equation (control group).

Study designs to be included: We will include only randomized controlled trials in the current study.

Eligibility criteria: RCTs were considered for inclusion if they evaluated critical adult patients (≥18 years) receiving calories either guided by repeated IC (IC group) or a simple predictive equation (control group).

Information sources: Articles available only in abstract form or meeting reports were also excluded.

Main outcome(s): The primary outcome was short-term mortality.

Quality assessment / Risk of bias analysis: We evaluated potential evidence of bias using the Cochrane risk-of-bias tool for RCTs. We assigned a value of high, unclear, low to the following items: (1) sequence generation; (2) allocation concealment; (3) blinding; (4) incomplete outcome data; (5) selective outcome reporting; and (6) other sources of bias.

Strategy of data synthesis: An overall effect estimate for all data as risk ratio (RR) / mean difference (MD) with 95% CI will be calculated. The presence of statistical heterogeneity among the studies by using the Q statistics and the heterogeneity by using the I2 statistic was addressed. A p value of less than 0.10 or an I2 value of greater than 50% as indicative was considered of substantial heterogeneity. A random-effects model or a fixed-effects mode (DerSimonian-Laird) will be chosen when significant heterogeneity or nonsignificant heterogeneity was not observed, respectively.

Subgroup analysis: None.

Sensibility analysis: None.

Country(ies) involved: China.

Keywords: indirect calorimetry, critically ill, energy delivery, meta-analysis, mortality.

Contributions of each author:

Author 1 - Hui-Bin Huang - The author contributed to the conception, design, data interpretation, manuscript revision for critical intellectual content, and supervision of the study.
Email: hhba02922@btch.edu.cn
Author 2 - Jing-Yi Duan - The author contributed to the search of the scientific literature, and drafted the manuscript.
Email: djya01257@btch.edu.cn
Author 3 - Hua Zhou - The author contributed to the conception, design, and data analysis.
Email: icuzhouhua@163.com
Author 4 - Yuan Xu - The author contributed to the conception, design, and data interpretation.
Email: xyuan76@163.com