INPLASY PROTOCOL

To cite: Zheng et al. Vitamin D supplementation in critically ill patients: An up-dated meta-analysis. Inplasy protocol 2022100074. doi: 10.37766/inplasy2022.10.0074

Received: 18 October 2022

Published: 18 October 2022

Corresponding author:
Hui-Bin Huang

hhba02922@btch.edu.cn

Author Affiliation:
Beijing Tsinghua Chang Gung Hospital, Tsinghua University

Support: **None.**

Review Stage at time of this submission: **Data analysis.**

Conflicts of interest:
None declared.

Vitamin D supplementation in critically ill patients: An up-dated meta-analysis

Zheng, WH[1]; Yao, Y[2]; Huang, HB[3].

Review question / Objective: **Therefore, we aimed to perform a systemic review and meta-analysis to evaluate the effect of vitamin D on major clinical outcomes in this patient population, including an exploration of the supplemental vitamin D-associated influence factors.**
Eligibility criteria: **We excluded studies conducted on pregnant women and studies conducted in reviews, case reports, case series, post hoc analysis, or studies that did not report any predefined outcomes.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 October 2022 and was last updated on 18 October 2022 (registration number INPLASY2022100074).

INTRODUCTION

Review question / Objective: **Therefore, we aimed to perform a systemic review and meta-analysis to evaluate the effect of vitamin D on major clinical outcomes in this patient population, including an exploration of the supplemental vitamin D-associated influence factors.**

Condition being studied: **Vitamin D supplementation in critically ill patients. 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 more than 20 meta-analyses, which can guarantee the successful completion of the current research.**

METHODS

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

Intervention: The intervention group received vitamin D regardless of any regimen.

Comparator: The control group receives a placebo or no drug or usual care.

Study designs to be included: RCTs.

Eligibility criteria: We excluded studies conducted on pregnant women and studies conducted in reviews, case reports, case series, post hoc analysis, or studies that did not report any predefined outcomes.

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

Main outcome(s): 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 becalculated. 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.meta-analysis;meta-regression,

Subgroup analysis: proportion of mechanical ventilation.

Sensitivity analysis: None.

Country(ies) involved: China.

Keywords: Vitamin D; critical illness; mechanical ventilation; meta-analysis; mortality.

Contributions of each author:
Author 1 - When-He zheng.
Author 2 - Yan Yao.
Email: 2692125411@qq.com
Author 3 - Hui-Bin Huang.
Email: hhba02922@btch.edu.cn