

INPLASY

Association of preoperative VE/VCO₂ slope and postoperative mortality: A systematic review and meta-analyses

INPLASY2023110042

doi: 10.37766/inplasy2023.11.0042

Received: 09 November 2023

Published: 09 November 2023

Corresponding author:

Yang zhao

594624370@qq.com

Author Affiliation:

Department of Anesthesiology,
Affiliated Hospital of North Sichuan
Medical College, No.1 Maoyuan
South Road, Nanchong, 637000,
Sichuan, China.

Yin, XM¹; Huang, J²; Zhao, Y³.

ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2023110042

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 09 November 2023 and was last updated on 09 November 2023.

INTRODUCTION

Review question / Objective Patients: Adults undergoing surgery under general anaesthesia; Expose: preoperative VE/VCO₂ slope; Outcome: mortality; RCTs, cohort studies and case-control studies were all included.

Rationale All controlled studies were included if they investigated the association of preoperative VE/VCO₂ slope and mortality in adult patients with general anaesthesia.

Condition being studied Cardiopulmonary exercise testing (CPET) is performed routinely to stratify risk and guide the perioperative care of patients undergoing major surgery, individually derived CPET variables directly associated with functional capacity, such as VE/VCO₂, correlate with poor postoperative outcomes. However, the

association between elevated VE/VCO₂ and mortality remain unclear in patients undergoing surgery under general anaesthesia.

METHODS

Participant or population Adults undergoing surgery under general anaesthesia.

Intervention preoperative VE/VCO₂ slope.

Comparator None.

Study designs to be included RCTs, cohort studies and case-control, cross-sectional studies were all included.

Eligibility criteria None.

Information sources Pubmed/Embase/Cochrane library.

Main outcome(s) All cause mortality. 30-day mortality, 90-day mortality.

Quality assessment / Risk of bias analysis Newcastle-Ottawa Scale for cohort studies.

Strategy of data synthesis ("VE/CO2" OR "VE-VCO2" OR "V(E)/V(CO2)" OR "VE/Vco2" OR "Ve/VCO2" OR "ventilatory efficiency" OR "minute ventilation/carbon dioxide" OR "minute ventilation to carbon dioxide") AND (survive[Tiab] OR mortality[Tiab] OR dead[Tiab] OR mortalities[Tiab] OR dead[Tiab] OR deaths[Tiab]).

Subgroup analysis None.

Sensitivity analysis None.

Language restriction None.

Country(ies) involved China.

Keywords VE/VCO2, mortality, surgery.

Contributions of each author

Author 1 - Xuming Yin.

Email: 383609835@qq.com

Author 2 - Jiao Huang.

Email: hjstet@163.com

Author 3 - Yang zhao.

Email: 594624370@qq.com