

# INPLASY

## Dexmedetomidine for delirium prevention in adult patients following cardiac surgery: a meta-analysis of randomized controlled trials

INPLASY202430132

doi: 10.37766/inplasy2024.3.0132

Received: 30 March 2024

Published: 30 March 2024

### Corresponding author:

Chang Meng

15931865117@163.com

### Author Affiliation:

Emergency General Hospital.

Bai, Y; Wang, D; Zhang, LN; Wang, SF; Sun, B; Meng, C; Liu, P.

### ADMINISTRATIVE INFORMATION

**Support** - None.

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

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202430132

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 March 2024 and was last updated on 30 March 2024.

### INTRODUCTION

**Review question / Objective** We sought to conduct a systematic review and meta-analysis to evaluate the efficacy and safety of dexmedetomidine for delirium prevention in adult patients following cardiac surgery.

**Condition being studied** Delirium incidence and mortality.

### METHODS

**Participant or population** Patients following cardiac surgery.

**Intervention** Dexmedetomidine.

**Comparator** Placebo.

**Study designs to be included** The search strategy was RCTs.

**Eligibility criteria** (1) Adult patients following cardiac surgery.(2) Patients with dexmedetomidine or placebo.(3) Outcomes Indicators: Delirium incidence, ICU-days, mortality.

**Information sources** We will search the references in the included trials and personal files. We will request advice from experts in the field. In addition, we will search associated articles from meetings, and contacted the authors of included trials, if need.

**Main outcome(s)** Delirium incidence, ICU-days, mortality.

**Quality assessment / Risk of bias analysis** We evaluated the methodological quality of the

---

individual studies using the Cochrane risk of bias tool for RCTs.

**Strategy of data synthesis** We will consider using the number of participants and deaths between different groups for analysis.

**Subgroup analysis** In the evaluation of delirium, we will be divided into preoperative, intraoperative and postoperative, postoperative groups according to the relationship between the application of drugs and the time of surgery.

**Sensitivity analysis** We conducted sensitivity analyses to investigate the influence of a single study on the overall pooled estimate of each predefined outcome.

**Country(ies) involved** China.

**Keywords** Dexmedetomidine; Delirium; Cardiac surgery.

**Contributions of each author**

Author 1 - Ying Bai.

Author 2 - Duo Wang.

Author 3 - Lingnan Zhang.

Author 4 - Shufang Wang.

Author 5 - Biao Sun.

Author 6 - Chang Meng.

Author 7 - Peng Liu.