INPLASY

Corresponding author:
Yu JiaJie

1138703971@qq.com

Author Affiliation:
North Sichuan Medical College.

Meta analysis of factors related to spinal cord injury after type A aortic dissection surgery

Yu, JJ.

ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - The review has not yet started.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202430115

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 March 2024 and was last updated on 27 March 2024.

INTRODUCTION

*R*eview question / Objective p: Patients with type A aortic dissection i: Patients who have undergone surgery c: Using evaluation tools to evaluate the presence or absence of spinal cord injury after surgery o: The incidence of spinal cord injury s:Queue studies and case-control studies.

Condition being studied Arterial dissection (AD) is caused by rupture of the intima, which leads to blood flow entering the media and penetrating the entire aorta and branching into the blood vessels, forming a true false separation of the aortic wall. According to Stanford's classification, it can be divided into type A and type B. Type A aortic dissection involves the ascending aorta, accounting for 66% of acute dissection. The onset of the disease is urgent and the progression is rapid. If left untreated, the early mortality rate can reach 1% to 2% per hour. Spinal cord injury is a postoperative complication of Stanford type A aortic dissection, which can lead to poor prognosis, increased mortality rate, and increased economic burden on patients.

METHODS

Participant or population Patients with type A aortic dissection.

Intervention None.

Comparator None.

Study designs to be included Case control studies and cohort studies.

Eligibility criteria Inclusion criteria: (1) The study subjects were patients with type A aortic dissection who underwent surgery, aged ≥ 18

years old; (2) Use assessment tools to identify the occurrence of delirium; (3) The outcome measure is the risk factors for delirium; (4) The research type is cohort study or case-control study. Exclusion criteria: (1) Literature that cannot be obtained in full and cannot be converted or extracted due to incomplete data; (2) Repeated publications; (3) Literature with low methodological quality evaluation.

Information sources China National Knowledge Infrastructure, Wanfang, VIP, China Biomedical Literature Database, Web of Science, Pub Med, Embase, Cochrane Library databases.

Main outcome(s) Two researchers independently conducted literature screening and cross checking based on inclusion and exclusion criteria. They read the title and abstract to conduct preliminary screening of the literature, and then read the entire text to determine the final inclusion of the literature. If there are differences in opinions between the two parties, they consulted the opinion of the third researcher. After the literature screening is completed, data extraction is carried out, including the authors of the included literature, publication year, incidence of spinal cord injury, evaluation tools, and related risk factors.

Quality assessment / Risk of bias analysis The Newcastle Ottawa Scale (NOS) recommended by Cochrane Assistance Network was used, which includes three dimensions of research object selection, inter group comparability, and measurement of exposure factors. There were a total of 8 items, with a maximum score of 9 stars. 7-9 were high-quality literature, 5-6 were medium quality literature, and<5 were low-quality literature.Use funnel plot to evaluate publication bias.

Strategy of data synthesis Use Rev Man 5.4 software to analyze the data. Extract the OR value and 95% CI of the multivariate analysis results of postoperative spinal cord injury in patients with type A aortic dissection, and use the inverse variance method to convert the OR value. Firstly, conduct heterogeneity tests on the included literature. If $P \geq 0.1$ and $I2 \leq 50\%$, it indicates small heterogeneity between the studies. Choose a fixed effects model for analysis. If P50%, it indicates large heterogeneity between the studies, and use a random effects model. Compare the consistency of the results of two models for sensitivity analysis, and explore the stability of the results.

Subgroup analysis None.

Sensitivity analysis Sensitivity analysis of statistically significant risk factors using fixed effects models and random effects models, respectively.

Language restriction China.

Country(ies) involved China.

Keywords Type A aortic dissection; Spinal cord injury; Related factors.

Contributions of each author
Author 1 - Yu JiaJie.
Email: 1138703971@qq.com