

INPLASY

Aortic root replacement versus preservation in acute type A aortic dissection repair

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Piloting of the study selection process.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 23 October 2024 and was last updated on 23 October 2024.

INTRODUCTION

Review question / Objective Compare the long-term outcomes of aortic root replacement (ARR) versus conservative root approach (CRA) in patients undergoing acute type A aortic dissection (ATAAD) repair.

Condition being studied Acute type A aortic dissection (ATAAD) is a life-threatening cardiovascular emergency requiring immediate surgical intervention.

METHODS

Participant or population The population comprised patients with acute type A aortic dissection who underwent surgical repair.

Intervention There was an intervention group treated with ARR (including Bentall procedure or VSRR).

Comparator There was a second intervention group treated with CRA.

Study designs to be included The study design was retrospective/prospective, randomized/nonrandomized, single center/multiple centers, with matched/unmatched populations.

Eligibility criteria The outcomes studied included follow-up with survival/mortality rates and/or need for reoperation on the proximal aorta, and at least 1 of these outcomes were presented as Kaplan-Meier curves;

The exclusion criteria including non-English language studies, studies with no Kaplan-Meier curves, overlapping samples, and those reporting only postoperative outcomes.

Information sources The following sources were searched: PubMed, the Cochrane Library and the Web of Science, and the reference lists of relevant articles.

Main outcome(s) The outcomes studied included follow-up with survival/mortality rates and/or need for reoperation on the proximal aorta, and at least 1 of these outcomes were presented as Kaplan-Meier curves.

Quality assessment / Risk of bias analysis The quality of the included studies was assessed using the Newcastle-Ottawa Scale for observational studies.

Strategy of data synthesis We used the curve approach, which reconstructs individual patient data (IPD) based on the published Kaplan-Meier curves from the included studies.

Subgroup analysis Subgroups are divided according to whether the populations are matched, and the type of ARR (VSRR or Bentall).

Sensitivity analysis Flexible parametric survival models, restricted mean survival time (RMST) analysis, Meta-regression.

Language restriction English.

Country(ies) involved China.

Keywords Acute type A aortic dissection; Aortic root replacement; Long-term survival; Reoperation.

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