

SUTURELESS VERSUS TRANSCATHETER AORTIC VALVE REPLACEMENT IN PATIENTS WITH AORTIC STENOSIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Rationale

Severe aortic stenosis is a common and life-threatening condition, particularly in the aging population. Both sutureless aortic valve replacement (SU-AVR) and transcatheter aortic valve replacement (TAVR) have emerged as minimally invasive alternatives to traditional surgical aortic valve replacement (SAVR). However, the optimal strategy for treating patients with severe aortic stenosis remains controversial, with conflicting data regarding the short- and long-term outcomes of SU-AVR and TAVR. A systematic review and meta-analysis are needed to synthesize available evidence and provide clarity on the comparative clinical outcomes of these two techniques.



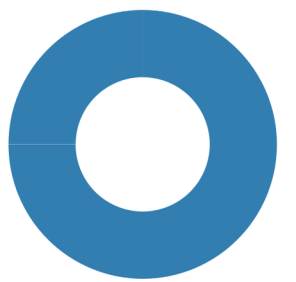
Purpose

To compare the clinical outcomes of SU-AVR and TAVR in patients with severe aortic stenosis, focusing on early mortality and procedure-related complications.

Risk of Bias

Robins 1

observational studies



Some concerns 100%



Study Design



Systematic Review and Meta-analysis



Data Sources

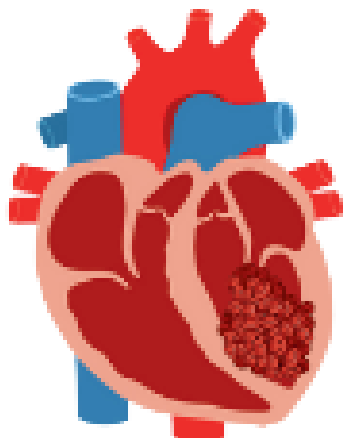
Pubmed - Embase - Cochrane



Seventeen studies were included



Population



6,000 patients with severe aortic stenosis



Comparison

SU-AVR

3,006

VS

TAVR

2,994



Endpoints

Risk Ratio 95% CI
0 ← Favors SU-AVR 1 Favors TAVR → 10

Early mortality

3,006

0.52; 0.33-0.84

2,994

Vascular complication

3,006

0.16; 0.07-0.36

2,994

Pacemaker implant

3,006

0.60; 0.38-0.96

2,994

Significant Para-valvular Leak

3,006

0.09; 0.04-0.18

2,994

Acute renal failure

3,006

0.86; 0.54-1.37

2,994

Stroke/TIA

3,006

0.62; 0.40-0.96

2,994

Mismatch

3,006

0.91; 0.53-1.58

2,994



Conclusion

SU-AVR was associated with lower early mortality and fewer complications compared to TAVR. These findings highlight potential advantages of SU-AVR in selected patients

