**Risk Factors for Early Death after Surgery in Patients with Acute Stanford Type A Aortic Dissection: A Systematic Review and Meta-analysis**

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**Abstract:**

**Background:** There are many risk factors related to early death after surgery among patients with acute Stanford type A aortic dissection (ATAAD) that have been analyzed in previous studies, but no evidence-based study has been conducted to confirm these risk factors. **Aims:** The aims of this study were to investigate risk factors for early death after surgery in patients with ATAAD via systematic review and meta-analysis and assess evidence-based strategies for preventing adverse events. **Methods:** The protocol for this study was prospectively registered with PROSPERO (CRD 42022332772).The authors systematically searched PubMed, Ovid, Scopus, Web of Science and Cochrane Library following the Preferred Reporting Items for Systematic Reviews and Meta-analyses guidelines from database construction to May 2021. Studies that met the selection criteria were determined by two independent researchers, and the odds ratios (ORs) and 95% confidence intervals (95% CIs) were reported for the risk factors and were pooled using Stata 15.0. **Results:** A total of 23 studies including 5510 patients met the inclusion criteria, and 10 risk factors were analyzed in this meta-analysis. The preoperative risk factors for early death after surgery in patients with ATAAD were age [(OR: 1.03, 95% CI (1.01, 1.06)], male sex [(OR: 1.43, 95% CI (1.06, 1.92)], shock [(OR: 1.91, 95% CI (1.06, 3.45)], malperfusion [(OR: 3.45, 95% CI (2.24, 5.31)] and cardiac tamponade [(OR: 3.89, 95% CI (1.17, 12.98)]. **Conclusion:** Patients with ATAAD who have an older age, male sex, shock, malperfusion and cardiac tamponade have a higher risk for early death after surgery. However, more highly homogenous studies are needed to demonstrate these results. Clinical staff should pay more attention to these factors and take individual actions to reduce mortality after surgery in patients with ATAAD.

**Keywords:** acute Stanford type A aortic dissection, early death, surgery, risk factors, systematic review, meta-analysis

**Biography:Yi Zhang** graduated with master degree from Sun Yat-sen University in China, works in cardiovascular intesive care unit for several years, and has rich nursing care and management experience in cardiovascular diseases and related emergencies, especially in specialization for perioperative management of aortic dissection and coronary heart disease. He is an excellent and imaginative scholar and cardiovascular specialized registered nurse, who devote himself in clinical practice and academic research, and invest much passion and effort to establish a precision model of whole disease course for cardiovascular health management and continuing nursing. He has already published several articles about evidence-based cardiovascular nursing care in RCCSE and SCI, which were accepted and quoted by professional peers and specialists around the world.

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