

Outcomes of Pediatric Patients After Vascular Ring Repair: Symptom Resolution and Reintervention by Repair Type



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Background

- Vascular rings encircle the trachea and esophagus, compressing them and causing difficulty swallowing and breathing.

Purpose: To investigate symptom persistence and reoperation after vascular ring repair while also assessing the impact of different repair techniques.

Hypotheses

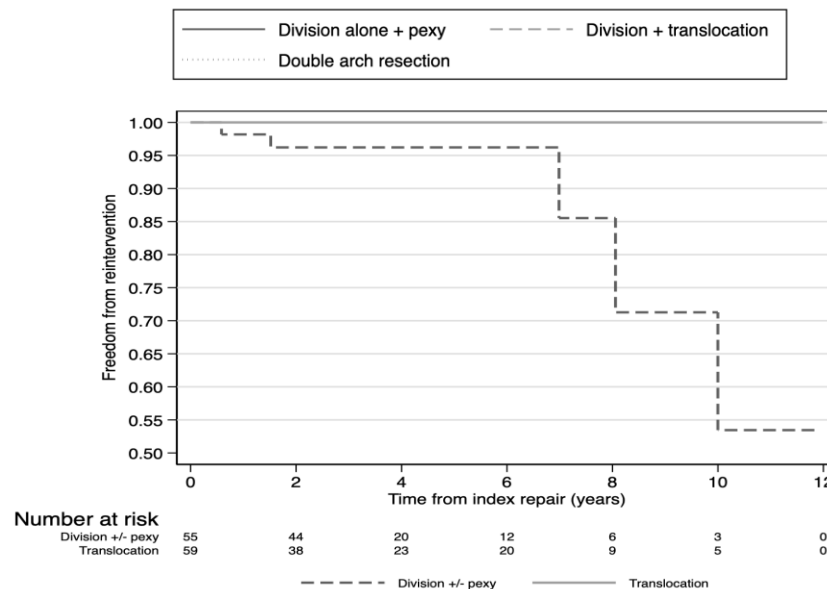
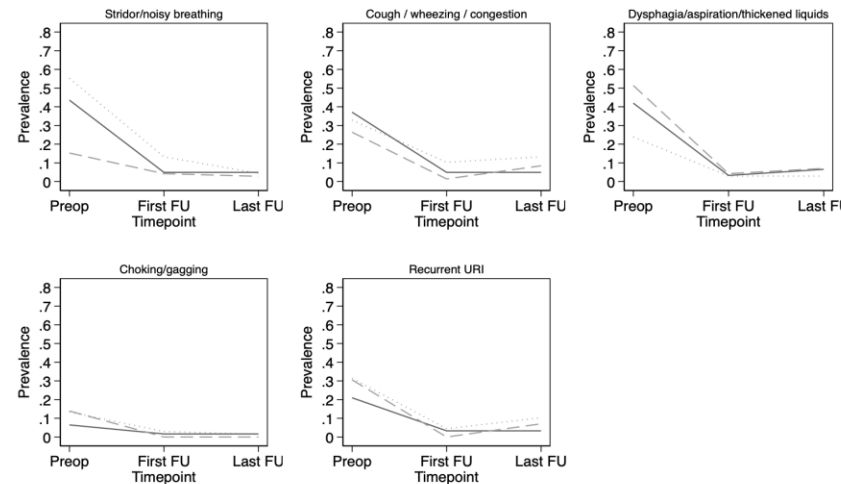
- Symptoms dramatically decrease for all repair types.
- Division with translocation yields fewer symptoms and reinterventions than division ± pexy in Right Aortic Arch with Aberrant Left Subclavian Artery (RAA ALSA) patients.

Methods

Single-center retrospective cohort 2008-2025 (n=202)

RAA ALSA: (n=122;60.4%) and Double Aortic Arch: (n=71;35.1%)

Respiratory and digestive symptoms were compared between pre-operative, first post-operative, last post-operative visits, and stratified by repair type.



Results

- Significant decrease in symptoms across all repair types
- RAA ALSA patients that underwent division ± pexy showed higher rates of reintervention than those that had division with translocation (log-rank p=0.012)

Conclusions

- Post-op symptom profile is similarly successful across all repair types.
- Division with translocation should be performed over division ± pexy in RAA ALSA patients due to reduced likelihood of reintervention.