

Right Ventricular Outflow Tract Obstruction after the Arterial Switch Operation for Taussig-Bing Anomaly Repair

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BACKGROUND

- The arterial switch operation has become the preferred technique for Taussig-Bing repair
- Despite an improvement in mortality, the reintervention burden remains high after Taussig-Bing repair
- Reinterventions on the right ventricular outflow tract (RVOT) and pulmonary arteries remain especially problematic (20-50%)

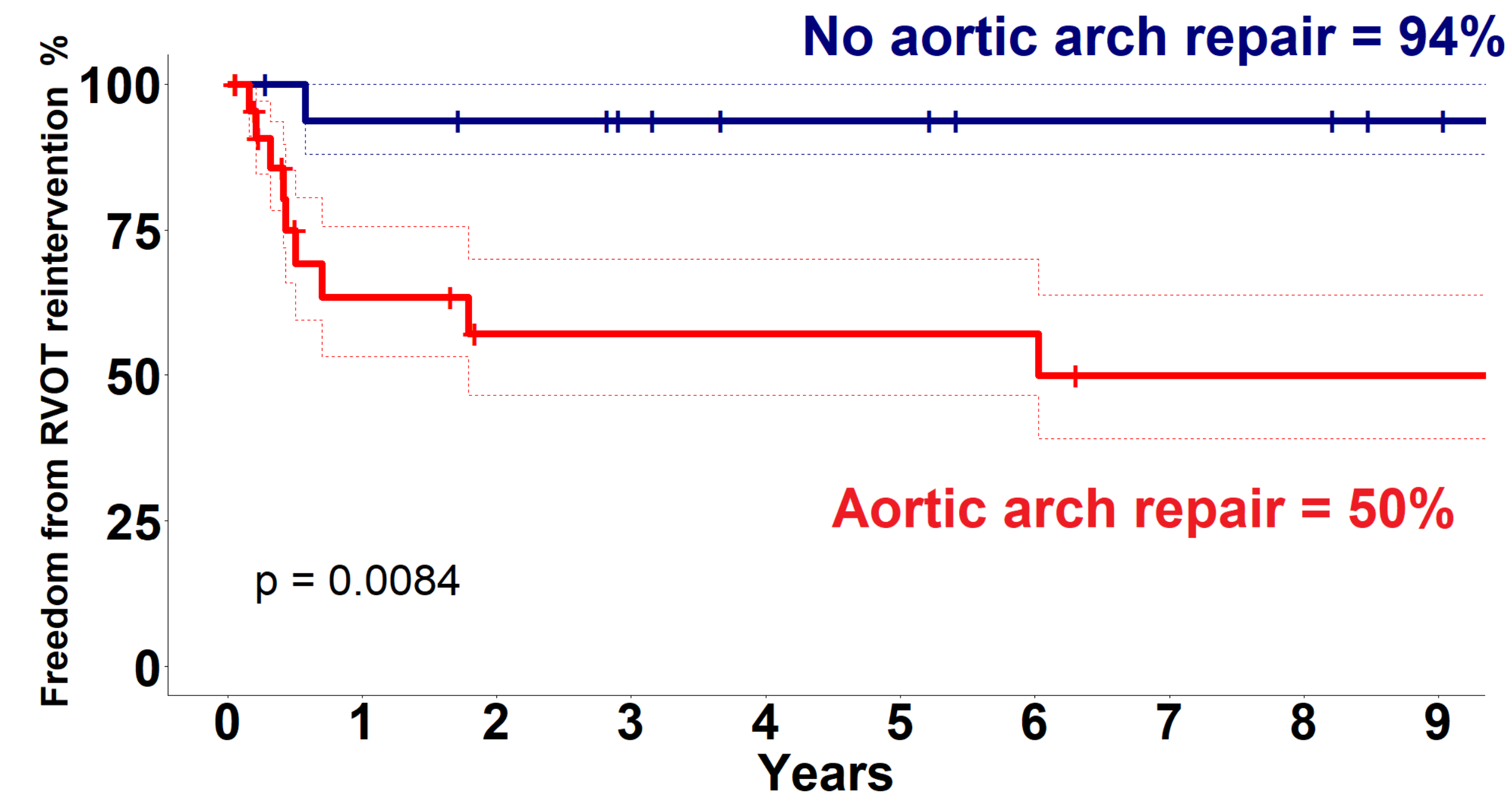
PURPOSE

- We studied variables for association with freedom from RVOT reintervention after the arterial switch operation for Taussig-Bing anomaly repair

METHODS

- Retrospective study:
- 41 patients underwent Taussig-Bing anomaly repair at Texas Children's between 1992 and 2020
- Survival analysis studied variables for association with freedom from RVOT reintervention

RESULTS



Freedom from RVOT reintervention

	Hazard ratio	95% CI	P-value
Pulmonary valve Z-score	0.8	0.6, 1.2	0.33
Aortic valve Z-score	0.6	0.3, 0.9	0.03
Pulmonary valve /aortic valve ratio	3.2	0.4, 23	0.24
Pulmonary trunk Z-score	0.5	0.3, 0.8	0.8
Ascending aorta Z-score	0.4	0.2, 1.1	0.1
Pulmonary trunk /ascending aorta ratio	0.7	0.09, 5.4	0.7
Aortic arch Z-score	0.5	0.2, 0.9	0.03

CONCLUSION

- Lower aortic valve and arch Z-scores, aortic arch repair, and an anatomy unsuitable for the LeCompte maneuver were associated with a higher risk of RVOT reintervention
- Arch repair in patients who could not undergo a LeCompte maneuver was associated with a high burden of RVOT reinterventions

