

Outcomes and Reintervention after Repair of Type I Aortic Dissection

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Background

- The most common extent of aortic dissection involves both ascending and descending thoracic aorta
- Acute ascending dissections are often repaired surgically, but may have residual dissection in the descending aorta

Research Objectives

- To characterize the natural history of residual dissection of the descending aorta after surgical repair of acute, ascending dissection
- To compare outcomes between patients undergoing hemiarch and total arch repairs for extensive aortic dissection

Methods

- Single-center retrospective cohort study of all Debakey Type I dissections (10/2009 - 7/2020)
- Inclusion: any patient with acute (< 30 days) dissection with involvement of both ascending and descending aorta who underwent repair
- Exclusion: medically managed Type A dissection
- Statistical approach: Bivariate methods and Kaplan-Meier method with log-rank test

Disclosures

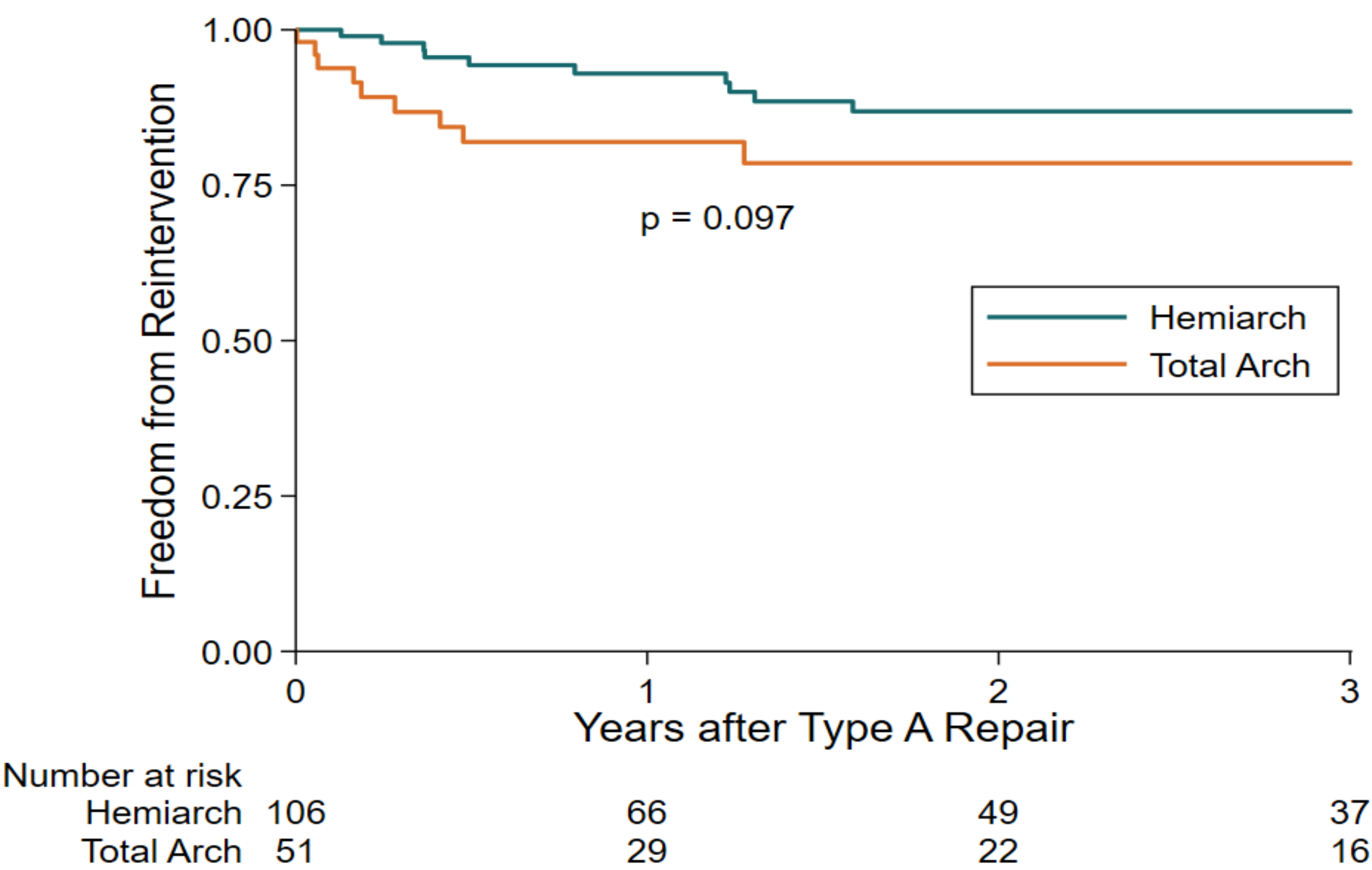
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Table I: Baseline Characteristics

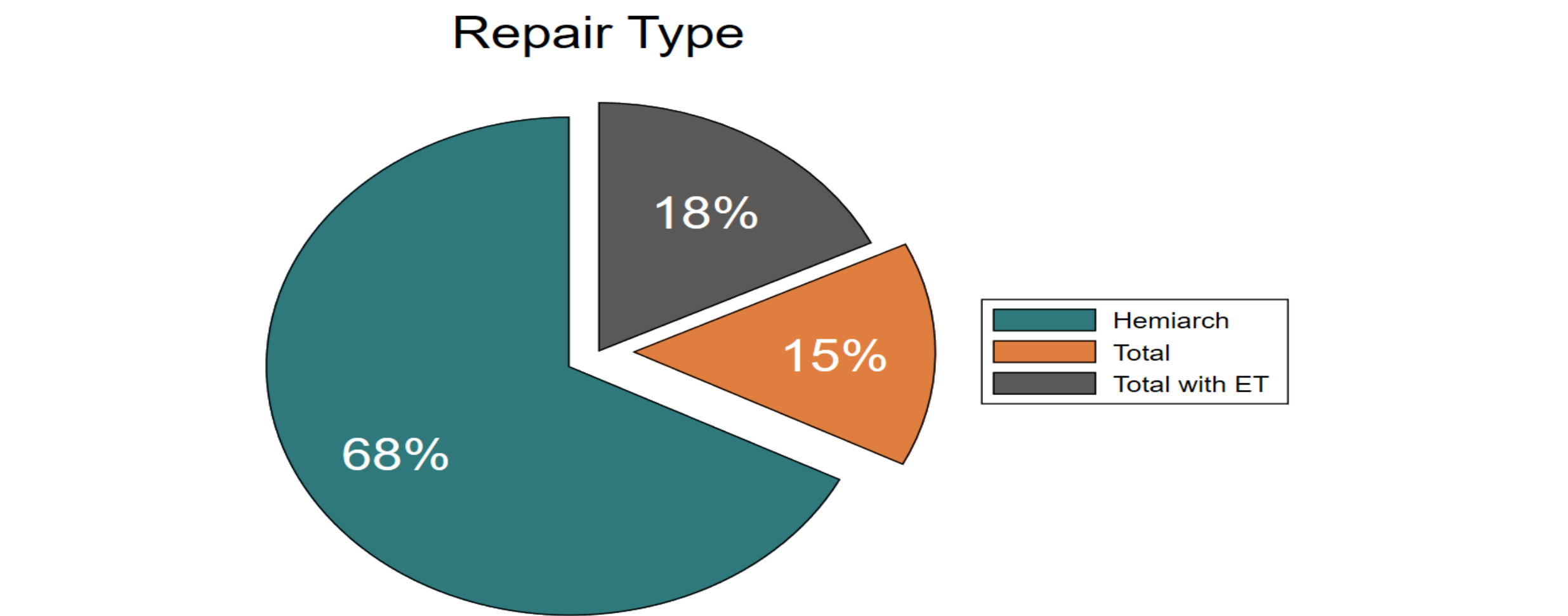
	Hemiarch n = 106	Total Arch n = 51	P
Age, mean (SD), years	60 (13)	56 (12)	.08
Male, n (%)	76 (72)	33 (65)	.36
Race/ethnicity, n (%)			
White	52 (52)	21 (41)	.39
Black/African-American	33 (33)	22 (43)	
Other	15 (15)	8 (16)	
Hypertension, n (%)	77 (76)	43 (84)	.30
CAD, n (%)	20 (20)	6 (12)	.26
Depressed EF, n (%)	44 (44)	13 (25)	.03
Diabetes mellitus, n (%)	7 (7)	5 (10)	.54
Active smoking, n (%)	25 (26)	16 (32)	.44

Figure I: Freedom from Reintervention



Results

- Total study population n = 157 patients undergoing surgery for Type I dissection
- Overall freedom from reintervention was 84.1% at 3 years
- Overall survival at 3 years was 76.1%
- 26/157 (16.2%) underwent a reintervention at a wide range of time intervals after the index procedure



Limitations

- Single-center, retrospective nature
- Extent of descending dissection is variable
- Limited power to compare utility of descending interventions
- Heterogeneity of outcomes

Conclusions

Residual dissection after repair of ascending aortic dissection frequently requires reintervention, with many indications other than aneurysm alone

Patients with aortic dissection benefit from lifelong surveillance with a multidisciplinary team