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Published In/Presented At

Perillo, T., Kelly, K., Hoeing, C., & Wu, J. (2020, August). Type A Aortic Dissection, 5-year Operative Outcome Study. Poster Presented at: LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

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Type A Aortic Dissection, 5-year Operative Outcome Study

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Background

- An aortic dissection is a medical emergency, where a tear of the inner layer of the aorta causes blood accumulation between the inner/outer layers of the aorta
 - Type A dissection: occurrence in ascending aorta
 - Most common among older males
 - Common risk factors include hypertension, atherosclerosis, smoking, and structural heart problems
- Previous studies have found that rates of post operative complications and mortality are significantly lower when compared to those of dissections treated with medication alone

Objective

- Evaluate outcomes of type A aortic dissection repair via median sternotomy method

Methods

- Classified**
- Retrospective Review of 148 LVHN patients with history of aortic surgery
 - Subdivided a cohort of 23 patients who underwent type A aortic dissection repair ranging from 2016-2020
- Reviewed**
- Accessed patient data from in-house record database
 - Data transfer to custom REDCap database for review
- Analyzed**
- Statistics generated regarding preoperative risks/demographics, in addition to outcomes/mortality of type A dissection repair

Results

Type A Dissection Patients N = 23		
History	N	%
Hypertension	6	26.09
Smoking (Tabacco)	8	34.78
Hyperlipidemia	6	26.09
Obesity	8	34.78
Family History	4	17.39
Atrial Fibrillation	8	34.78
Anemia	4	17.39
Operative Cannulation	N	%
Right Axillary Artery	14	60.97
Right Femoral Artery	6	26.09
Aorta	1	4.35
Right Atrium	2	8.69
Mortality	N	%
<30 Days Post Op	3	13.04
<90 Days Post Op	2	8.69
>90 Days Post Op	0	0

Table 1: Patient data for Type A aortic dissection patients and general procedural outcomes

- Median age at time of surgery: 64 years
- Percentage of male patients: 78.26%
- Mean BMI: 26.04 kg/m² [overweight]
- Overall mortality: 21.74% (N=5)

Outcomes

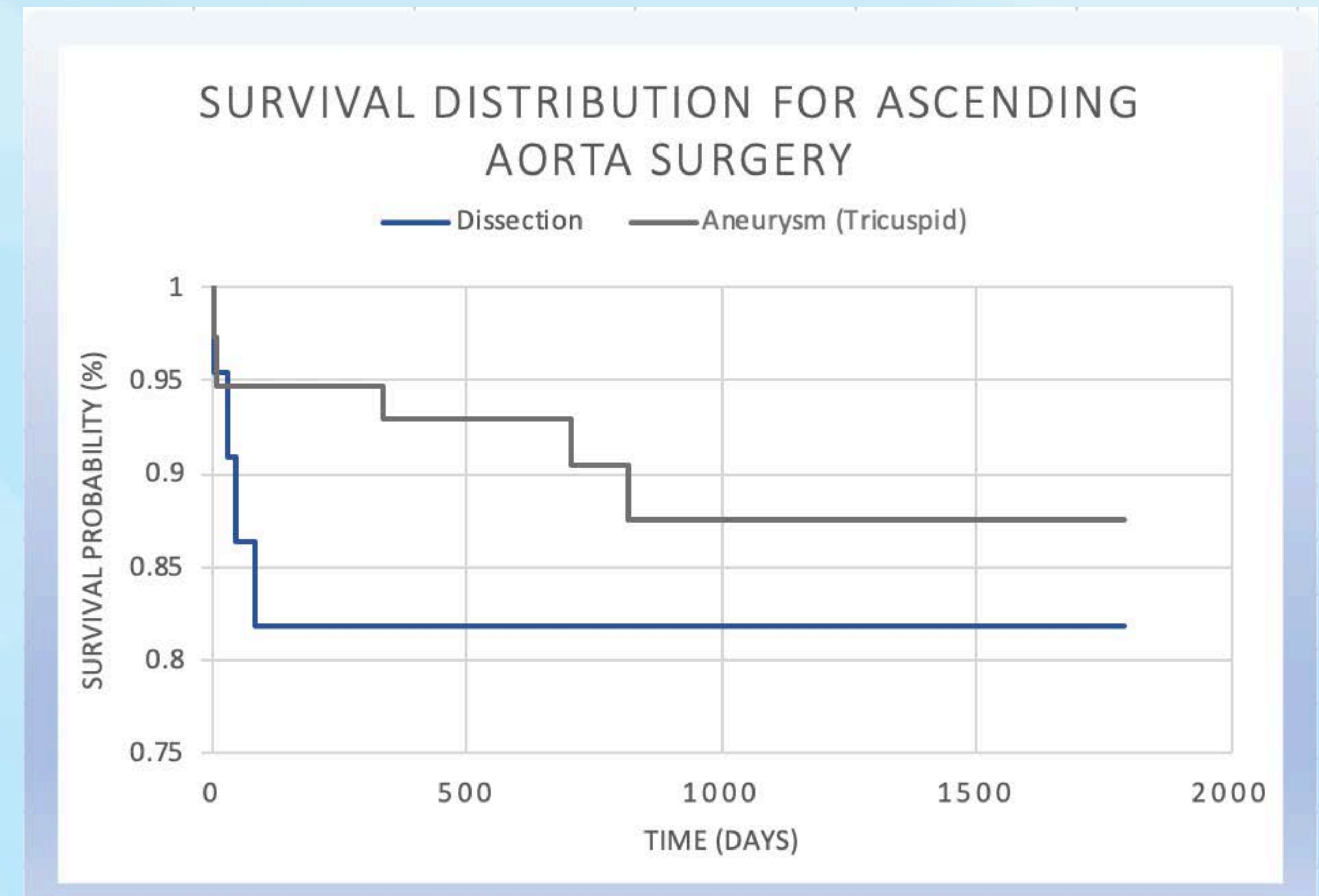


Figure 1: Adjusted Kaplan-Meier curve of Type A aortic dissection repair operations. A comparison to ascending aortic aneurysm repair is made, signifying the higher mortality rate of dissections

Conclusion and Future Direction

- Aortic dissection is a medical emergency, and repair surgery has a higher mortality rate compared to other aortic surgeries
- Instances of death occurred all within the first three months post operation
- More research into advanced surgical repair and preventative medicine would better improve outcomes of those with type A aortic dissection

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