

Anxiety in Aortic Clinic: Prevalence of Psychological Distress and Impact of Surgical Intervention and Perceptions of Longevity

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Introduction

- Thoracic aortic aneurysm is a potentially life-threatening cardiovascular condition that can have serious medical implications and impact patients' overall quality of life (McEntire et al. 2021)
- There is a high prevalence of psychological distress among patients with cardiovascular disease, but this is unknown within the thoracic aortic aneurysm population (Sall et al. 2022)
- Living with this condition may create psychological distress and impact patients' perceptions of longevity

Objective

- Assess for the presence of psychological distress in thoracic aortic aneurysm patients
- Examine whether psychological distress impacts patient beliefs about longevity
- Determine if psychological distress or beliefs about longevity differ by surgical status

Methods

- Thoracic aortic aneurysm pts (N= 44) recruited during annual visit
 - Two patient groups: Surgical (n=16) vs. Non-surgical/surveillance (n=28)
 - Demographic variables:
 - Mean age: 64.07
 - Sex: Men = 26, Women = 18
 - Race: White = 33, Black = 11
- Patients completed measures assessing:
 - Mental health distress (DASS-21)
 - Beliefs about their longevity
 - Beliefs about the longevity of healthy peers

Prevalence of Psychological Distress

Presence of elevated psychological distress

	Elevated distress (N= 44)	%
Depression	12	27.3%
Anxiety	24	54.5%
Stress	14	31.8%

*Elevated distress defined as severity level mild or greater

- Psychological distress is highly prevalent within thoracic aortic aneurysm patients.
- Anxiety symptoms were endorsed within over half of the patient population.

Psychological Distress Between Groups

DASS-21 Clinical interpretation

Severity	Depression	Anxiety	Stress
Normal	0 - 9	0 - 7	0 - 14
Mild	10 - 13	8 - 9	15 - 18
Moderate	14 - 20	10 - 14	19 - 25
Severe	21 - 27	15 - 19	26 - 33
Extremely Severe	28+	20+	34+

- Psychological distress is present across both populations
- There is not a difference in psychological distress between surgical and non-surgical patient groups

<https://www.bristol.ac.uk/media-library/sites/sps/documents/c-change/dass-twenty-one-scoring-and-interpretation.pdf>

Psychological distress between surgical and non-surgical groups

	Surgical mean (n = 16, 36.4%)	Non-surgical mean (n = 28, 63.6%)	<i>p</i> value
Depression	24.33	20.00	0.481
Anxiety	14.91	17.67	0.467
Stress	26.00	20.25	0.135

Perceptions of Longevity

	Surgical mean (n = 16, 36.4%)	Non-surgical mean (n = 28, 63.6%)	<i>p</i> value
Self-perceived life expectancy	81.06 years	81.71 years	0.854
Healthy peer perceived life expectancy	77.75 years	84.79 years	0.011*
Difference	-3.31	3.07	0.133

Difference = healthy peer life expectancy – self life expectancy

Perceived Life Expectancy and Psychological Factors

Surgical Intervention Correlation Values (*r*)

	Depression	Anxiety	Stress
Self-perceived life expectancy	-0.29	-0.26	-0.44*
Difference	0.28	0.26	0.29

Non-surgical Intervention Correlation Values (*r*)

	Depression	Anxiety	Stress
Self-perceived life expectancy	-0.27	-0.07	-0.24
Difference	0.09	0.16	0.19

Difference = healthy peer life expectancy – self life expectancy

Conclusions

- Mental health distress is highly prevalent in aortic aneurysm patients
- Psychological symptoms did not differ based on a proxy for disease severity
- For surgically treated patients, the presence of stress resulted in reduced appraisals of life expectancy
- Surgically treated patients may also perceive a sense of security following surgery
- Routine psychological evaluation of patients with aortic disease is needed

References

- Dass 21 Scoring and Interpretation*, www.bristol.ac.uk/media-library/sites/sps/documents/c-change/dass-twenty-one-scoring-and-interpretation.pdf.
- McEntire, Alexis, et al. "Psychological distress in response to physical activity restrictions in patients with non-syndromic thoracic aortic aneurysm/dissection." *Journal of Community Genetics* 12 (2021): 631-641.
- Sall, Kayla E., et al. "Cardiac Psychology Training in a Rural Health Care Setting: East Carolina Heart Institute." *Health Psychology*, vol. 41, no. 10, 2022, pp. 803-812.