

BACKGROUND

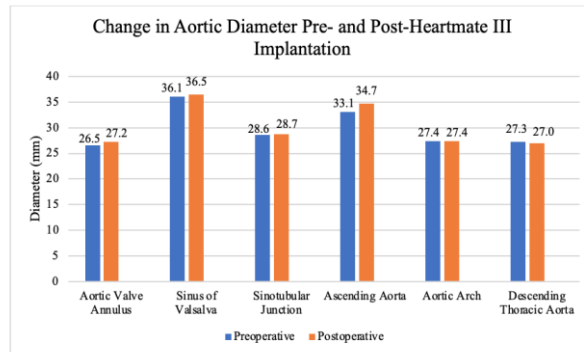
- Continuous flow physiology seen in durable left ventricular assist devices has unknown effects on aortic dilation and aortic valve function
- Our objective is to examine the impact of Heartmate III implantation on aortic diameter and aortic valve competency

METHODS

- Retrospective single-center analysis from 2018 to 2021 of all patients who underwent Heartmate III implantation
- Pre and postoperative computer tomography and echocardiogram data were used
- **Primary outcome:** Change in aortic diameter
- **Secondary Outcomes:** Change in aortic valve insufficiency (AI) or degree of opening.

RESULTS

Table 1.	N=66
Age – mean (SD)	50.3 (13.6)
Male - n (%)	48 (72.7)
BMI – mean (SD)	31.67 (7.88)
BSA – mean (SD)	2.07 (0.28)
Redo Sternotomy – n (%)	7 (10.6)
Concomitant Aortic valve repair – n (%)	3 (4.5)
Concomitant Aortic valve replacement – n (%)	1 (1.5)
Degree of Preoperative AI	
None/Trace – n (%)	59 (89.4)
Mild – n (%)	5 (7.6)
Mild/moderate – n (%)	1 (1.5)
Moderate – n (%)	1 (1.5)
Severe	0 (0)
Degree of AI at 1-year	
None/trace – n (%)	33 (73.3)
Mild – n (%)	12 (26.7)
Moderate – n (%)	0 (0)
Severe – n (%)	0 (0)
Degree of AV Opening at 1-year	
Opens consistently – n (%)	17 (38.6)
Intermittent opening – n (%)	10 (22.7)
Closed – n (%)	17 (38.6)
Degree AI at 2-years	
None – n (%)	31 (73.8)
Mild – n (%)	10 (23.8)
Moderate – n (%)	1 (2.4)
Severe – n (%)	0 (0)
Degree of AV Opening at 2-years	
Opens consistently – n (%)	12 (28.6)
Intermittent – n (%)	7 (16.7)
Closed – n (%)	23 (54.8)



CONCLUSIONS

- Our analysis found no significant change in aortic diameter or aortic valve competency after HeartMate III implantation
- Overall the incidence of >mild AI is rare at 2-years follow up
- Limitations: Size of cohort, CT measurements done by research team, length of follow up