Outcomes of Septal Myectomy on Patients with Hypertrophic Cardiomyopathy

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Published In/Presented At

Hoeing, C., Kelly, K., Perillo, T., & Wu, J. (2020, August). Outcomes of Septal Myectomy on Patients with Hypertrophic Cardiomyopathy. Poster Presented at: LVHN Research Scholar Program Poster Session, Lehigh Valley Health Network, Allentown, PA.

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Background

- *Hypertrophic Cardiomyopathy* (HCM) is a condition in which a portion of the heart becomes thickened without an obvious cause
  - *Hypertrophy* = enlargement of tissue
- Drug-resistant patients → *Septal Myectomy*
  - Surgical removal of enlarged portions of the heart
- Previous studies have found promising outcomes that include low mortality rates and rare occurrences of major complications
  - Septal myectomy decreases symptoms of HCM

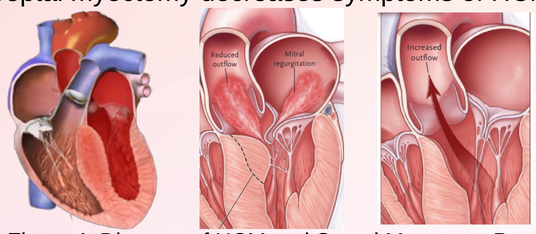

Figure 1: Diagram of HCM and Septal Myectomy Procedure

Objective

- This study seeks to evaluate the survival rates of patients with HCM that underwent the septal myectomy procedure.

Methods

Classified
- Single-center retrospective review of all septal myectomy patients from 2006-2020 at LVHN

Reviewed
- Specific patient data gathered and assessed through in-house database
- Data was recorded in a unique REDCap database

Analyzed
- Descriptive statistics were used to analyze the significance of patient survival rates

Results

- 114 total patients
  - 14 died (12.28%)
  - Average survival time of 1134.14 days (3.10 years)
- 3 patients died within 30 days of the procedure (2.63%)
  - 2 died due to excessive bleeding
- Major complications were **not** prevalent in the population
  - Data is statistically significant, $p < 0.001$
- Survival rates are promising → only 12.28% died in a patient cohort that spans over 14 years

Factor	Number of events[a]		Number of censored[b]		Sample size
	N	%	N	%	
HCM Patients	14	12.28	100	87.72	114

Table 1: Septal Myectomy Patient Mortality Summary
Events = Death Censored = Alive

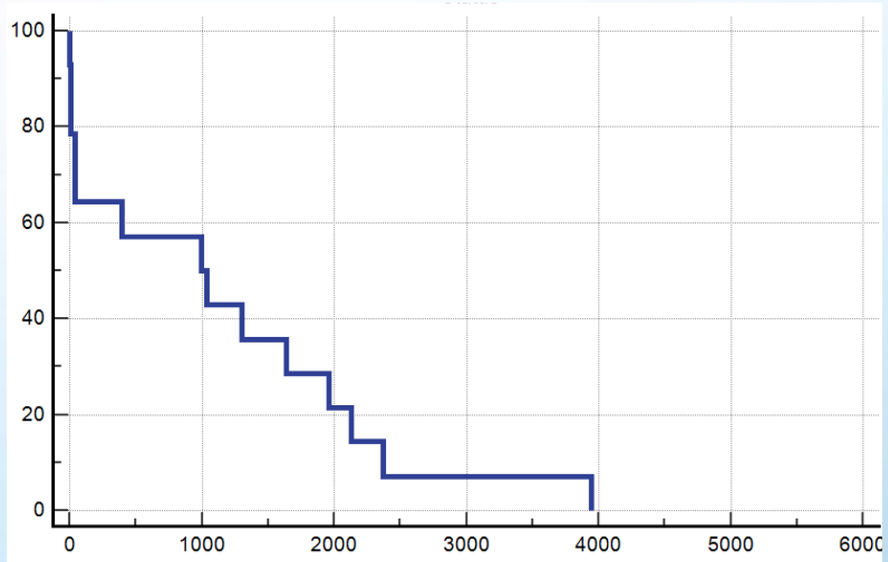

Figure 2: Kaplan-Meier Curve of Septal Myectomy Patients
The gradual drops in the curve illustrate promising survival rate for patients. The data suggests that this is statistically significant, $p < 0.001$.

	Risk Factor	N	%
Perioperative	CHF	51	44.7
	Mitral Regurgitation	47	41.2
	LVOTO	46	40.4
	SAM	35	30.7
	AFib	24	21.1
	CAD	23	20.2
	Prior Pacemaker	18	15.8
	Dyspnea	12	10.5
Postoperative	**Complication**	**N**	**%**
	New Pacemaker	10	8.7
	Heart Block	8	7.0
	Kidney Failure	8	7.0
	New VSD Repair	5	4.4
	Extra Ventilator	3	2.6
	Excessive Bleeding	2	1.8

Table 2: Pre-Septal Myectomy Risk Factors and Postoperative Complications

Conclusions

- Patients with several comorbidities are at **higher risk** for the septal myectomy procedure
  - However, the overall survival rates are promising
- Long-term survival rates of HCM patients that underwent septal myectomy illustrate **success** for this procedure
- Future research is encouraged to evaluate long-term outcomes of septal myectomy over 20 years and understand the effects of pre-TAVR risk factors

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