

CARDIOVASCULAR HOSPITALIZATION POST- SEPTAL MYECTOMY FOR OBSTRUCTIVE HYPERTROPHIC CARDIOMYOPATHY: A 3-YEAR ANALYSIS OF 5,101 PATIENTS

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BACKGROUND

The non-fatal cardiovascular events post septal myectomy (SM) in obstructive hypertrophic cardiomyopathy (oHCM) patients are not well characterized. We report on the non-fatal long-term outcomes post-SM from a large all-payer claims database.

METHODS

- The Symphony Health Claims database was analyzed to identify all patients (age range 18-80) with oHCM who underwent SM (2016-2021).
- Follow-up started 31 days post-SM. Patients without claims within 120 days prior to SM were removed from analysis (n=107).
- The primary outcomes of the study were cardiovascular hospitalizations (CVH), atrial and ventricular arrhythmias, and need for advanced heart failure (HF) therapy.
- CVH was defined as any stay at a hospital inpatient unit (>95% of claims), emergency department visit or new diagnoses at nursing facility (Table 1).
- Multivariable regression models were used to identify predictors of CVH post-SM and model selection was done by backwards elimination using Akaike Information Criterion (AIC).

RESULTS

- A total of 5,101 patients (median age 62.0 (52.0, 70.0), 53.2% females, 70% commercial insurance) underwent SM.
- During 2.7 (1.2, 4.2) years median follow-up, the cumulative incidence of CVH was 46.7% (80% within 16 months post-SM), new atrial fibrillation/flutter 25.4%, ventricular arrhythmias 9.7%, syncope 9.3%, myocardial infarction 5.2%, cardiac arrest 1.6%, and need for advanced HF therapy 0.6% (Table 1).
- Patients with CVH post-SM were more likely to have hypertension, chronic obstructive pulmonary disease, chronic kidney disease, and prior pacemaker/implantable cardioverter defibrillator at baseline. Predictors for CVH are shown in Table 2.

Figure 1: KMC of CVH over follow-up period.

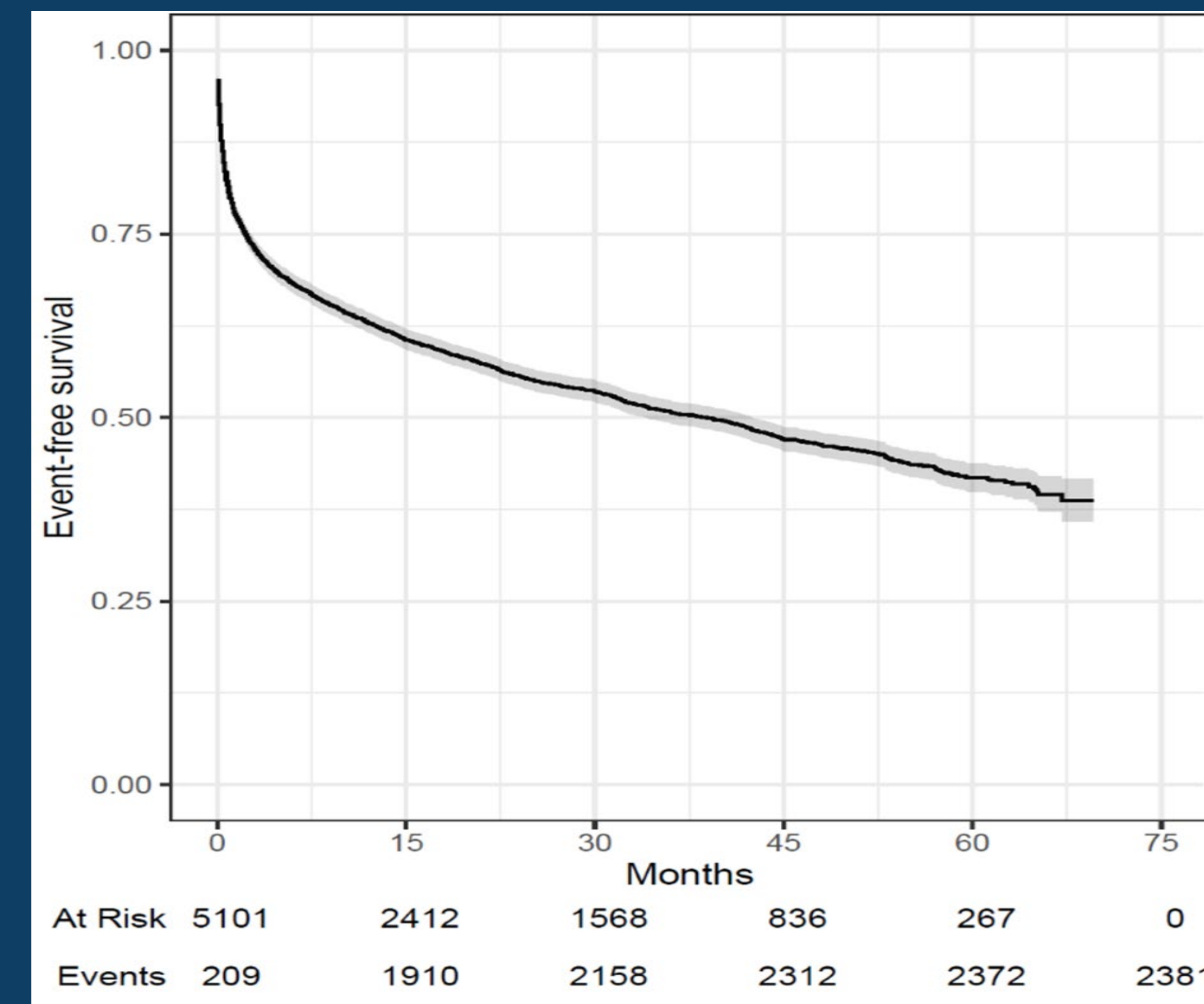


Table 1: Long-term outcomes following SM in oHCM.

Long term outcome	n	(%)
Heart Failure	1446	(28.3)
New atrial fibrillation/flutter	1294	(25.4)
Ventricular fibrillation/tachycardia	497	(9.7)
Syncope	473	(9.3)
Myocardial infarction	265	(5.2)
Cardioversion	235	(4.6)
Stroke	202	(4.0)
Cardiac arrest	81	(1.6)
Infective endocarditis	82	(1.6)
Dialysis	51	(1.0)
Ventricular assist device	18	(0.4)
Heart transplant	11	(0.2)
CV hospitalizations	2381	(46.7)

Figure 2: Multivariable regression model for predictors of CVH following SM.

Variables		aOR	95% CI		P value
Age (per 1 year)		1.01	1.00	1.02	<0.001
Female		1.12	1.03	1.22	0.007
Aortic valve disease		1.10	1.00	1.21	<0.001
Mitral valve disease		1.19	1.09	1.29	<0.001
Diabetes		1.16	1.04	1.30	0.008
Obesity		1.20	1.08	1.33	<0.001
Hypertension		1.24	1.14	1.36	<0.001
Pacemaker		1.41	1.16	1.72	<0.001
Chronic kidney disease		1.45	1.26	1.66	<0.001
COPD		1.65	1.44	1.89	<0.001
ICD		1.72	1.50	1.97	<0.001
← Lower risk Higher risk → 1.001.502.00					

CONCLUSIONS

- Over a 3-year of follow-up post-SM for oHCM, approximately half of the patients had CVH and 1 in 4 had new atrial fibrillation or flutter.
- Further studies are needed to understand the drivers of these events and strategies to mitigate the high incidence of CVH.

DISCLOSURE

AM reports research grants from Pfizer, Ionis, Attralus, and Cytokinetics, and personal fees from Cytokinetics, BMS, Eidos, Pfizer, Ionis, Lexicon, Alnylam, Attralus, Haya, BioMarin and Tenaya. MB, SH, DJ, RS report employment by Cytokinetics. Other coauthors have no disclosures



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