Supplemental Material

Data S1.

The relevant baseline and follow-up characteristics of the study population, separated on basis of surgery (vs. not) are shown in Table S1 below.

During this longer-term follow-up, 166 (16%) had evidence of AF and were treated with medications (144 with amiodarone, 6 with dofetilide, 16 with rate control). Nonsustained and sustained VT were noted in 109 (11%) and 4 (1%) patients, respectively. Also, during follow up, there were 42 (4%) patients with permanent pacemakers and 122 (20%) patients with ICD's, respectively. Within the surgical group (n=668), the type of cardiac surgeries was as follows: isolated myectomy (n=541, 81%) and myectomy plus mitral surgery (n=127, 19%). In the subgroup with concomitant mitral surgery, only 20 (16%) underwent valve replacement; the rest underwent transaortic repair. During follow-up, 20 (3%) patients needed a repeat surgical procedure to relieve LVOT obstruction (85% of which requiring an additional mitral valve procedure). The median time from initial evaluation to surgery was 36 days (interquartile range 1, 129 days). Of the surgical group, 554 (83%) patients underwent surgery following an initial evaluation (due to intractable symptoms or poor exercise tolerance), while 114 (17%) patients developed progressive CHF symptoms during follow-up that required surgery. In the nonsurgical group, 63% patients were in NYHA class I at initial presentation and remained asymptomatic during follow-up. The remaining patients were not offered surgery as the symptoms were deemed adequately controlled with medical therapy.

Table S1. Relevant baseline and imaging characteristics of study sample, separated on basis of surgery vs. not (n=1019)

Variable	No surgery N=351	Surgery N=668	p-value
Baseline data			
Age	50±13	50±14 13	0.44
Male sex	227 (65%)	413 (62%)	0.21
Family history of hypertrophic cardiomyopathy	53 (15%)	119 (18%)	0.15
History of sudden death	2 (1%)	4 (1.6%)	0.66
Unexplained syncope	32 (9%)	114 (17%)	0.01
Beta-blockers	226 (64%)	520 (78%)	<0.001
Calcium channel blocker	96 (24%)	220 (33%)	0.04
Disopyramide	7 (2%)	35 (5%)	<0.001
Angina	32 (9%)	111 (16%)	<0.01
New York Heart Association Class **I** **II** **III/IV**	 204 (58%) 147 (42%) 0	 92 (14%) 379 (57%) 197 (29%)	<0.001
Major risk factors **None** **1** **2 or more**	 269 (77%) 75 (21%) 7 (2%)	 497 (74%) 150 (23%) 21 (3%)	0.79
European risk score	3.79±-.9	4.24±0.7	0.02
Left ventricular ejection fraction (%)	62±5	62±4	0.31
Maximal left ventricular thickness (cm)	2.01±0.5	2.0±0.4	0.34
Indexed left atrial dimensions (cm/m2)	2.2±0.4	2.3±0.4	0.1
Resting mitral regurgitation > II+	11 (3%)	84 (13%)	<0.001
Maximal left ventricular outflow tract gradient (mm Hg)	74±35	103±39	<0.001
Left ventricular global longitudinal strain	-13.7%	-13.6%	0.15
Peak oxygen consumption (ml/kg/min on metabolic stress* Abnormal blood pressure response to exercise*	25±7 0	19±5 8 (1%)*	<0.001 <0.01
Follow up data			
Atrial fibrillation during follow up (excluding within 30-day postoperative)	39 (11%)	127 (19%)	<0.01
Nonsustained ventricular tachycardia	38 (11%)	71 (11%)	0.52
Pacemaker	9 (3%)	33 (5%)	0.04
Internal cardioverter defibrillator	37 (11%)	85 (13%)	0.18

Categorical variables are presented as n (%), continuous variables are presented as mean±standard deviation

*The percentages was derived only from those patients that underwent metabolic stress echocardiography (n=627).

The results of multivariable Cox Proportional Hazard analysis of the study population for the secondary composite endpoint of all cause death and appropriate ICD discharge are shown in supplemental tables 2 and 3 below (total n=1019, number of events n=79)

Tables S2 and S3. Multivariable Cox Proportional Hazard Analysis of the study population for the secondary composite endpoint of all-cause mortality and appropriate ICD discharge (total n=1019, number of events n=79)

Table S2. Model 1 (with standard major risk factors included in analysis)		
	Hazard ratio	**p-value**
Age	1.05 [1.02-1.07]	<0.001
Atrial fibrillation during follow-up	1.39 [1.12-1.79]	<0.001
LV-GLS (for every % worsening)	1.10 [1.03-1.24]	<0.001
Surgical myectomy	0.49 [0.18-0.73]	<0.01
Following potential additional predictors were considered for analysis but were not significant: standard major risk factors, sex, maximal LVOT gradient, medications		
Table S3. Model 2 (with ESC risk score included in analysis)		
	Hazard ratio	**p-value**
Atrial fibrillation during follow-up	1.45 [1.13-2.14]	<0.001
LV-GLS (for every % worsening)	1.09 [1.05-1.19]	<0.001
Surgical myectomy	0.47 [0.21-0.71]	<0.01
Following potential additional predictors were considered for analysis; but were not significant: ESC risk score, sex, medications		