

Asymptomatic Mitral Valve Repair Achieves Survival Comparable to the General Population: Supporting a Proactive Approach?

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INTRODUCTION

- The optimal timing of mitral valve (MV) repair for asymptomatic degenerative mitral regurgitation (MR) remains controversial. While early intervention may prevent progression of ventricular dysfunction and adverse remodeling, surgery in asymptomatic patients is often deferred due to concerns regarding procedural risk and uncertain long-term benefit.

OBJECTIVE

- To determine whether asymptomatic patients undergoing MV repair for degenerative MR experience survival outcomes comparable to or better than the general U.S. population.

METHODS

- Retrospective study of 943 patients undergoing MV repair for degenerative MR (2011-2025).
- Included isolated MV repair and combined CABG procedures.
- Asymptomatic (NYHA I) vs symptomatic (NYHA II-IV).
- Mortality compared with age- and sex-matched U.S. population estimates using 2021 CDC Life Tables.
- Standardized Mortality Ratios (SMR) calculated with 95% confidence intervals.

RESULTS

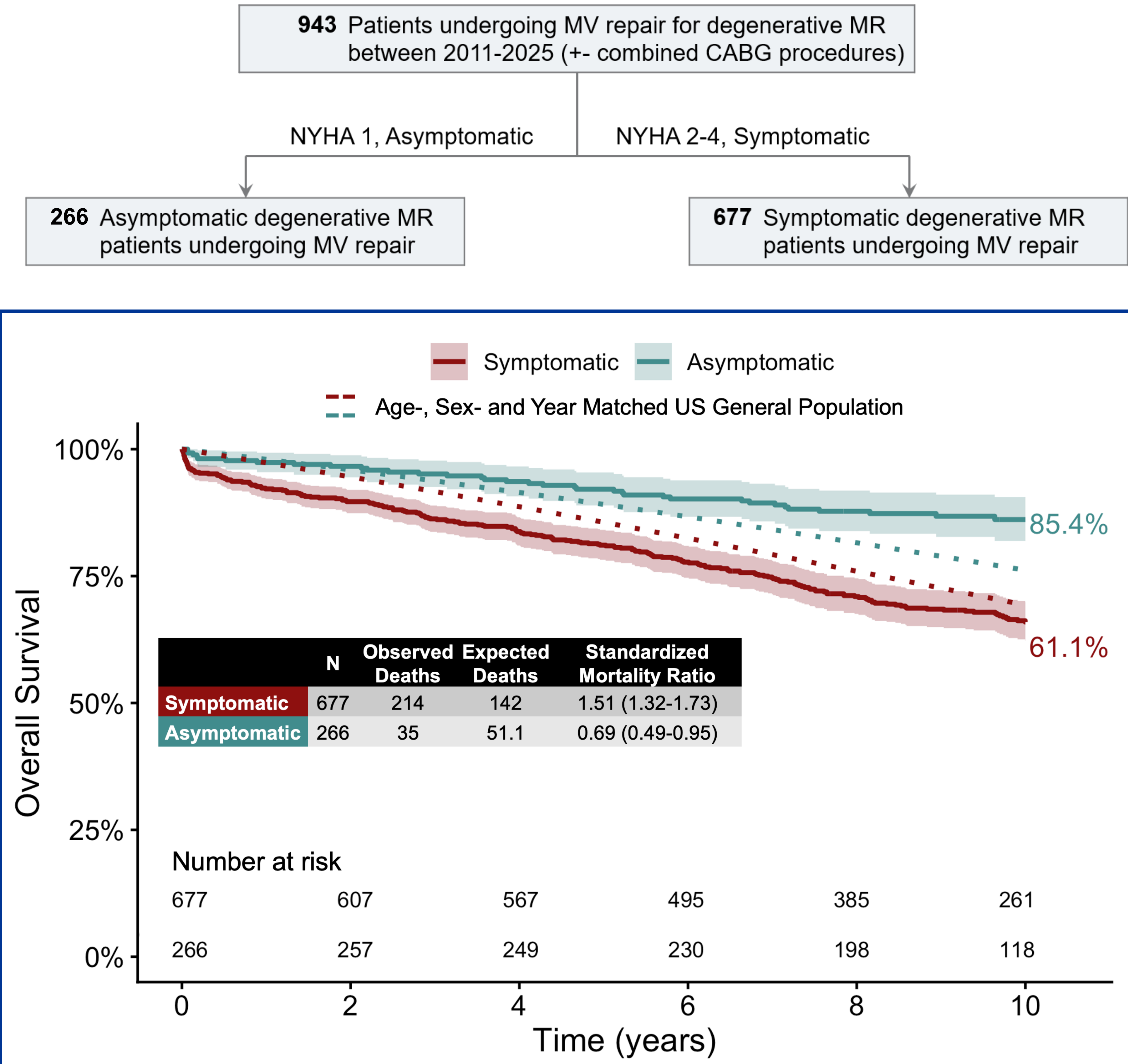


Figure 1. All-Cause Mortality and Expected Mortality

Variable	Symptomatic N = 677	Asymptomatic N = 266	p-value
Age	67.0 [59.0;75.0]	63.0 [56.0;69.0]	<0.001
Female	276 (40.8%)	81 (30.5%)	0.004
LVEF	55.0 [43.0;60.0]	58.0 [55.0;63.0]	<0.001
LVSD	37.0 [32.0;43.0]	35.0 [30.0;39.0]	0.001
LVEDD	53.0 [48.0;57.8]	53.0 [49.0;58.0]	0.836
PASP	42.0 [33.0;55.0]	36.0 [30.0;44.0]	<0.001
Prior AF	233 (34.4%)	63 (23.7%)	0.003
CABG	287 (42.4%)	46 (17.3%)	<0.001
CPB time, min	145 [109;185]	136 [109;176]	0.072
ACC time, min	112 [81.0;139]	99.5 [77.0;135]	0.038

Outcome	Symptomatic	Asymptomatic	p-value
Perioperative Mortality	30 (4.43%)	4 (1.50%)	0.048
Renal Failure	35 (5.17%)	3 (1.13%)	0.008
Prolonged ventilation	81 (12.0%)	8 (3.01%)	<0.001

CONCLUSIONS

Asymptomatic patients undergoing MV repair for degenerative MR demonstrated:

- Favorable perioperative outcomes
- Lower-than-expected long-term mortality compared with age- and sex-matched U.S. population estimates

These data suggest that a proactive strategy of early MV repair may provide survival outcomes comparable to or better than the general population. Further prospective studies are needed to define the optimal timing of intervention.