

Outcomes of Mitral Valve Repair Among High-Volume and Low-Volume Surgeons within a High-Volume Institution

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BACKGROUND

- Volume-outcome relationships have been described for mitral valve repair at both the institutional and individual surgeon level. The interaction between overall institutional experience and individual surgeon outcomes, however, is unknown.
- We hypothesize that the effects of low volume on individual surgeon outcomes may be mitigated by overall institutional experience.

OBJECTIVE

- The purpose of this study was to evaluate outcomes of high-volume (HV) and low-volume (LV) mitral repair surgeons in the context of a high-volume mitral repair institution.

METHODS

- All adult patients undergoing mitral valve repair at a high-volume mitral repair center from 1992 to 2019 were included.
- Concomitant procedures other than tricuspid or atrial fibrillation procedures excluded
- HV surgeons performed ≥ 20 cases/year, LV performed < 20
- Primary Outcomes:
 - Raw 30-day Mortality
 - Observed-to Expected Mortality Ratio

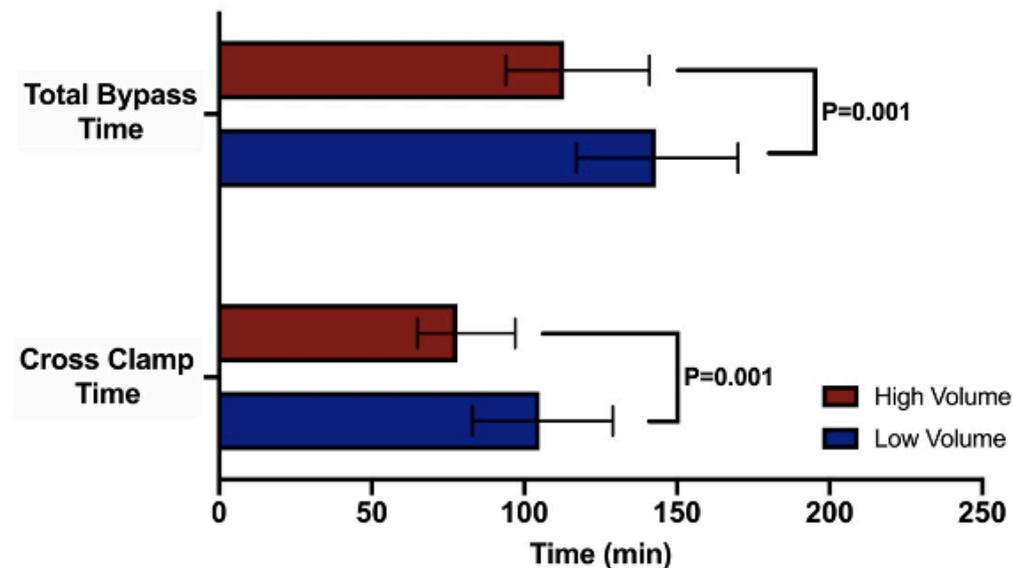
2530 Cases Included

HV Group (4 surgeons)
2012 (79%) cases

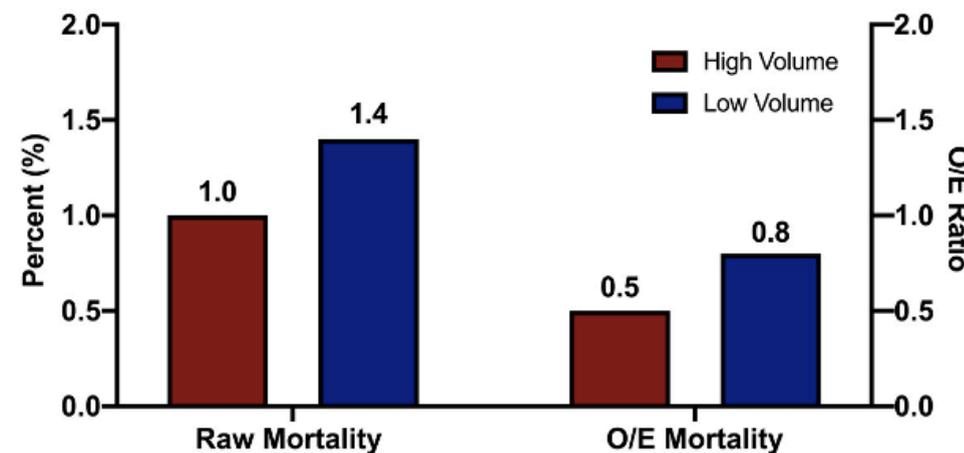
LV Group (7 surgeons)
518 (21%) cases

RESULTS

HV surgeons have shorter operative times compared to LV surgeons



There was no difference in 30-day mortality between groups



COX SURVIVAL MODEL

Predictors of mortality over 24-years

Characteristics	Odds Ratio	P-value
Chronic kidney disease	2.09 [1.57-2.79]	<0.001
Congestive heart failure	1.53 [1.28-1.81]	<0.001
Age (per year >60)	1.08 [1.07-1.08]	<0.001

- In our adjusted model, surgeon volume group was not contributory to long-term survival (p<0.949)

CONCLUSIONS

- We examined the volume-outcome relationship for mitral valve repair within an experienced mitral repair center.
- While LV surgeons had longer cross-clamp and bypass times, there were no differences in O/E mortality or short-term complications compared to HV surgeons.
- These results suggest that overall institutional experience may influence the outcomes of LV surgeons.
- Established volume-outcome relationships for mitral valve repair may be mitigated in experienced centers.

DISCLOSURE

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