Propensity Matched Comparison of Outcomes following Minimally Invasive vs Conventional Mitral Valve Repair

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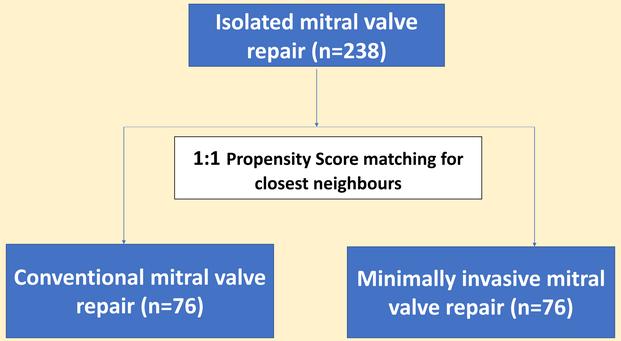
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Introduction

Recent NICE guidelines suggest minimally invasive mitral valve repair surgery should be offered to all patients who are suitable but comparative data supporting this approach is lacking. The aim of this study was to compare outcomes following both minimally invasive and conventional approaches to mitral valve repair.

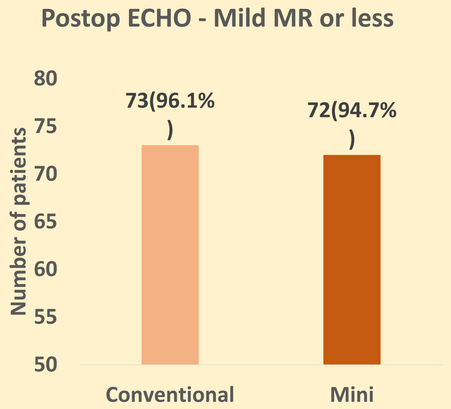
Methods

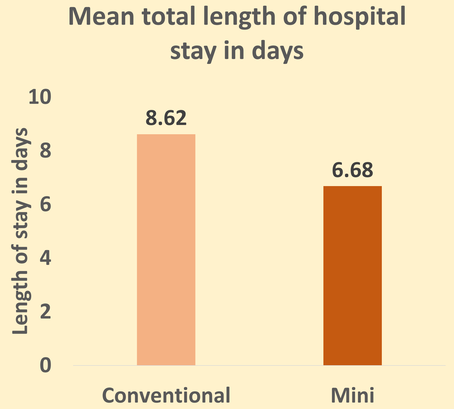
A total of 238 patients were identified who had isolated mitral valve repair at our institution between 2015 and 2020. 1:1 propensity score matching was performed for the closest neighbours yielding 152 matched cases in total with 76 patients in each group.

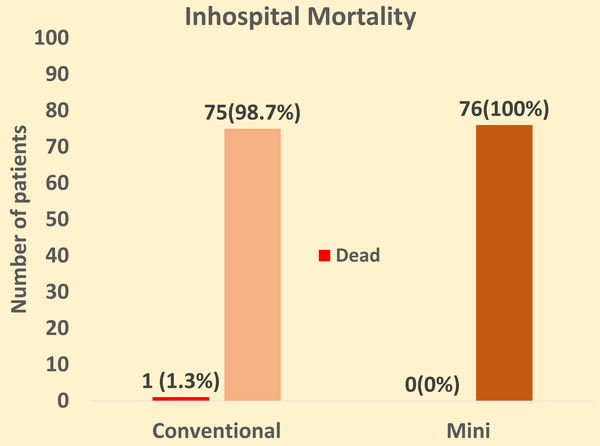


Results

For the 152 matched patients, there was no difference in mean Euroscore II (1.53 ± 1.02 (p = 1.000). There were no cases of in-hospital mortality in the minimally invasive group, and 1 case out of 76 in the conventional group. Mean total length of hospital stay was significantly lower in the minimally invasive group (8.62 ± 6.08 vs 6.68 ± 3.61, p <0.014). Following surgery, patients with mild residual mitral regurgitation or less were 94.7% in the minimally invasive group vs 96.1% in the conventional group, p =0.6804. Incidence of re-operation for bleeding was not significantly different (2.6% in the minimally invasive group vs 3.9%, p=0.6513), neither was the rate of blood transfusion at 9.2% in both groups.







Conclusion

This study shows that minimally invasive mitral valve repair is as safe as conventional mitral valve repair. A significant difference in length of stay after surgery may have resource and quality of life implications.