



Quality Of Life After Robotic Hybrid Coronary Revascularization Versus Conventional Coronary Artery Bypass Grafting

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Background

Coronary artery bypass grafting (CABG) is a common surgical intervention for coronary artery disease, and advancements in technology have led to the introduction of robotic-assisted CABG (R-CABG) as an alternative to traditional CABG. While R-CABG has shown similar outcomes to CABG in terms of perioperative outcomes, various studies have shown that R-CABG was also associated with fewer transfusions, shorter length of stay, and lower hospital cost. Given these findings this study aims to compare the subjective quality of life outcomes at 4 weeks and 6 months post-surgery using the SF36 questionnaire for patients undergoing traditional CABG and R-CABG.

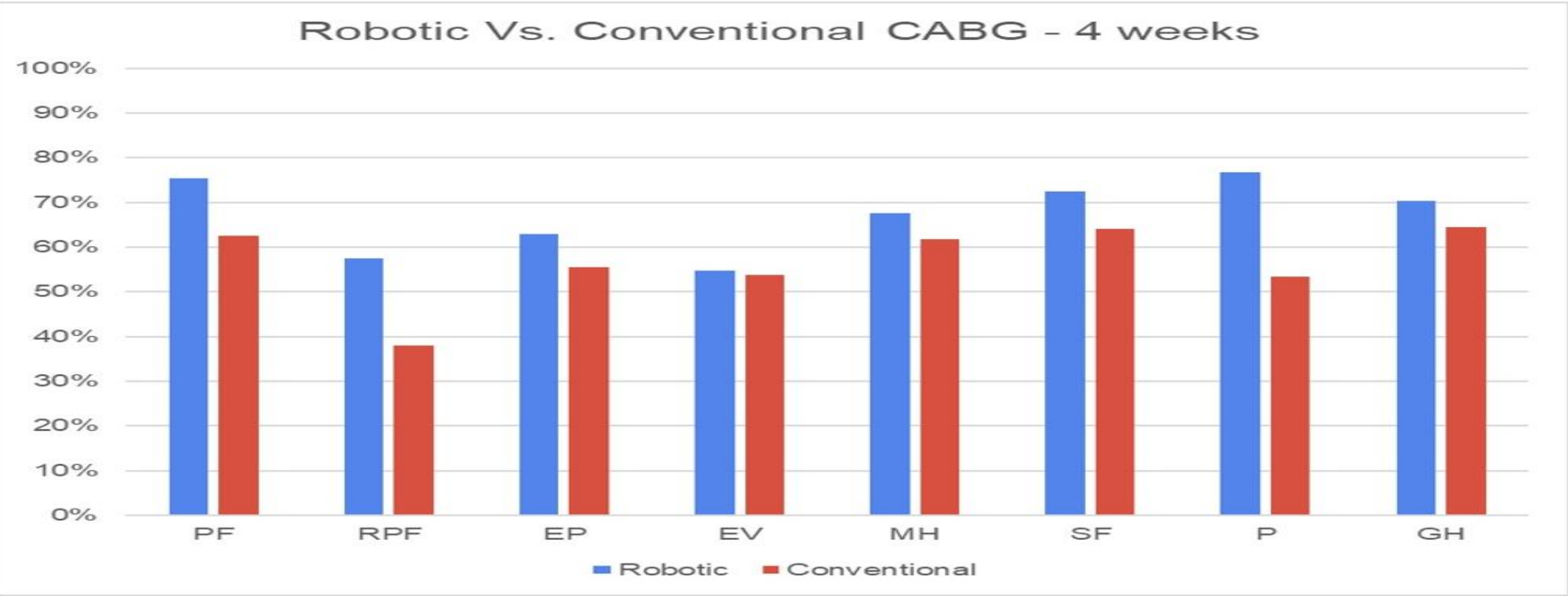
Methods

A prospective cohort study was conducted, enrolling patients scheduled for either traditional CABG or R-CABG. Quality of life outcomes were assessed using the SF36 questionnaire at two time points: 4 weeks and 6 months post-surgery. The SF36 questionnaire includes physical and mental health components, providing a comprehensive evaluation of patients' well-being.

Results

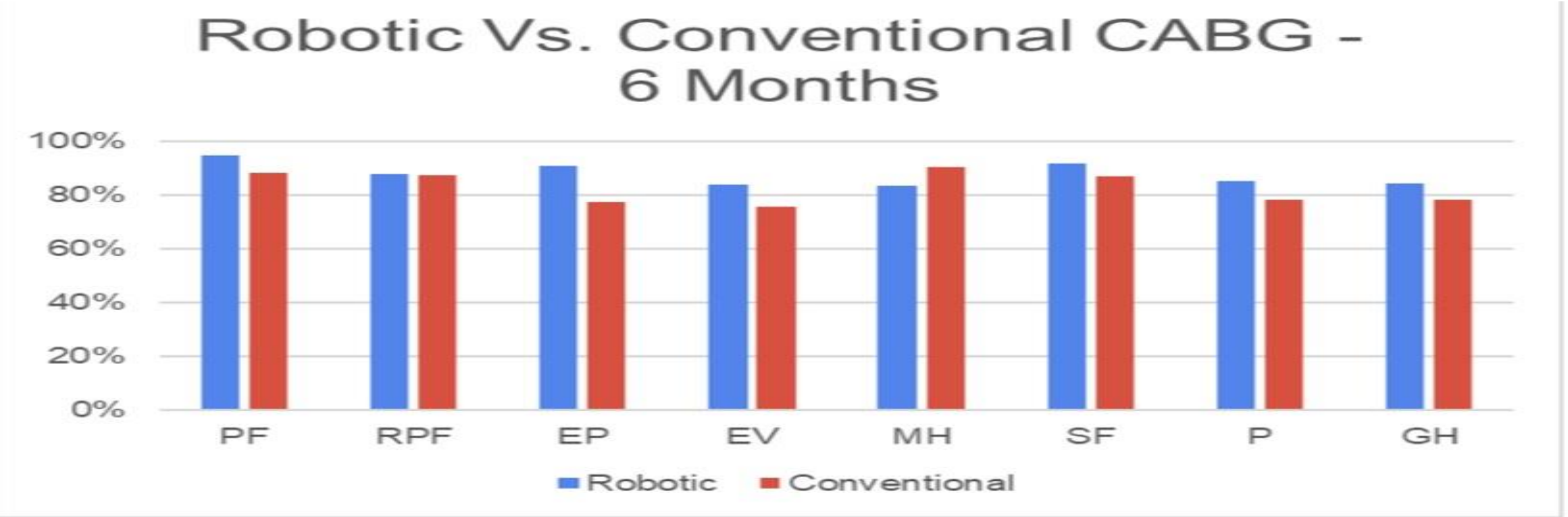
Preliminary findings at 4 weeks post-surgery indicate that both traditional CABG and R-CABG cohorts experienced improvement in physical and mental health scores. However, R-CABG patients demonstrated a statistically significant advantage in certain domains (Physical functioning, role of physical functioning, social functioning, pain and general health), suggesting a potential early benefit in quality of life outcomes.

At 6-month follow-up from the index surgery, R-CABG patients maintained their initial advantages in specific aspects (Physical functioning, role of physical functioning, and general health) of the SF36 scores whereas pain and social functioning were not significantly different across both groups. Interestingly, the mental health domain at 6 months showed patients undergoing the conventional procedure had higher scores.



Robotic Vs. Conventional CABG - 4 weeks

	Robotic	Conventional	P value
PF	0.754	0.626	p<0.05
RPF	0.574	0.381	p<0.05
EP	0.630	0.555	0.123
EV	0.548	0.537	0.762
MH	0.675	0.617	0.07
SF	0.725	0.642	p<0.05
P	0.768	0.535	p<0.05
GH	0.703	0.646	p<0.05



Robotic Vs. Conventional CABG - 6 weeks

	Robotic	Conventional	P value
PF	0.947	0.880	p<0.05
RPF	0.879	0.874	p<0.05
EP	0.905	0.773	0.275
EV	0.836	0.754	p<0.05
MH	0.835	0.903	p<0.05
SF	0.916	0.868	0.522
P	0.851	0.781	0.468
GH	0.841	0.781	p<0.05

Conclusion

This study provides valuable insights into the early and medium-term quality of life outcomes for patients undergoing traditional CABG versus R-CABG. The findings suggest that R-CABG may offer certain advantages in terms of rapid recovery and sustained quality of life improvements compared to traditional CABG. Further research with a larger sample size and long-term follow-up is warranted to validate these findings and inform clinical decision-making in selecting the most suitable surgical approach for patients with coronary artery disease.

Reference

