

Physician - Coronary Artery Diseases and Surgery

[MSB-05]

Early Discharge After Isolated Coronary Artery Bypass Graft Surgery Does Not Increase Risk of Rehospitalization

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Objective: This study aimed to investigate whether early discharge after coronary artery bypass grafting (CABG) is associated with increased rates of hospital readmission and emergency room (ER) presentation.

Methods: This retrospective cohort study utilized data from the Koşuyolu Adult Cardiac Surgery Quality Improvement Program database. Consecutive adults who underwent isolated CABG at a single institution between May 2023 and December 2023 were assessed for eligibility. Patients were excluded if they had surgery other than isolated CABG, experienced in-hospital mortality, or had a prolonged length of stay (>14 days) during index hospitalization. The study population was divided into early discharge (≤ 5 days) and late discharge (>5 days) groups. The primary endpoint was all-cause hospital readmission within 30 days of discharge, while the secondary endpoint was ER presentation for any reason within 30 days of discharge.

Results: The final cohort included 608 patients (228 early-discharge, 380 late-discharge). Median age was 61 years (interquartile range, 54-67). Groups were balanced in terms of demographics, risk profile, operative details, and outcomes. Thirty-day rehospitalization and ER presentation rates were lower in the early discharge group compared to the late discharge group; however, the differences were statistically insignificant (7.0% vs. 10.0%, $p=0.211$; 25.4% vs. 29.5%, $p=0.283$; respectively). Multivariate logistic regression analysis identified postoperative mechanical ventilation duration, sternal wound infection, postoperative stroke, and discharge with atrial fibrillation as the strongest predictors of hospital readmission within 30 days of discharge (odds ratio [OR]=1.049, 95% confidence interval [CI] 1.000-1.100; OR=10.268, 95% CI 1.882-56.032; OR=39.891, 95% CI 1.980-803.624; OR=24.724, 95% CI 1.499-407.804; respectively).

Conclusion: Early discharge after isolated CABG surgery was not associated with increased rates of hospital readmission or ER presentation within 30 days of discharge.

Keywords: Coronary artery bypass grafting, length of stay.

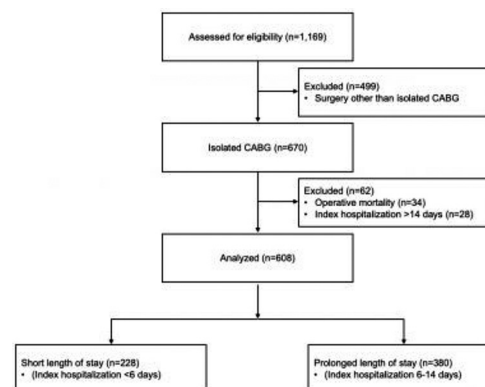


Figure 1. Flow diagram.

Table 1. Demographics, risk profile, operative details, and outcomes

	Early discharge (n=228)	Late discharge (n=380)	p value
Age (years, median [IQR])	59 (51-66)	62 (55-68)	<0.001
Female sex (%)	15.4	18.2	0.374
Recent MI (%)	42.9	52.3	0.127
Redo surgery (%)	0.0	1.0	0.295
Diabetes (%)	43.5	46.7	0.509
Hypertension (%)	44.7	49.9	0.220
Chronic hemodialysis (%)	0.57	0.69	0.688
Critical preoperative state (%)	1.1	4.2	0.280
LMCA disease (%)	29.0	42.2	0.546
LVEF (% , median [IQR])	65 (50-65)	60 (48-65)	0.046
Nonelective procedure (%)	41.7	46.9	0.307
Readmission* (%)	7.0	10.0	0.211
ER presentation* (%)	25.4	29.5	0.283

LMCA: Left main coronary artery; LVEF: Left ventricular ejection fraction; MI: Myocardial infarction; * Within 30 days of discharge.

References

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