

Early discharge in selected patients after an acute coronary syndrome – can it be safe?

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BACKGROUND

- The optimal length of hospital stay for patients with an uncomplicated acute coronary syndrome is still not well defined.¹
- Although not corroborated by any guideline, it is current practice an extent of 5-7 days of hospitalization.²
- European and American cardiovascular societies recognized a need to better define the appropriate length hospital stay, suggesting the use of prognostic tools to accurately identify low-risk patients who can be safely discharged within 72 hours.^{1,3,4}



Purpose

We aimed to evaluate the safety of an early discharge in selected low risk patients (pts) and also to identify predictors of longer hospital stay in this population.

1- O'Gara PT, Kushner FG, Ascheim DD, et al. 2013 ACCF/AHA guideline for the management of ST-elevation myocardial infarction: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2013;127:e362-425.

2. Steg PG, James SK, Atar D, et al. ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation. *Eur Heart J*. 2012;33:2569-619.

3. Kotowycz MA, Cosman TL, Tartaglia C, et al. Safety and feasibility of early hospital discharge in ST-segment elevation myocardial infarction –a prospective and randomized trial in low-risk primary percutaneous coronary intervention patients (the Safe-Depart Trial). *Am Heart J*. 2010;159: 117.e1–6

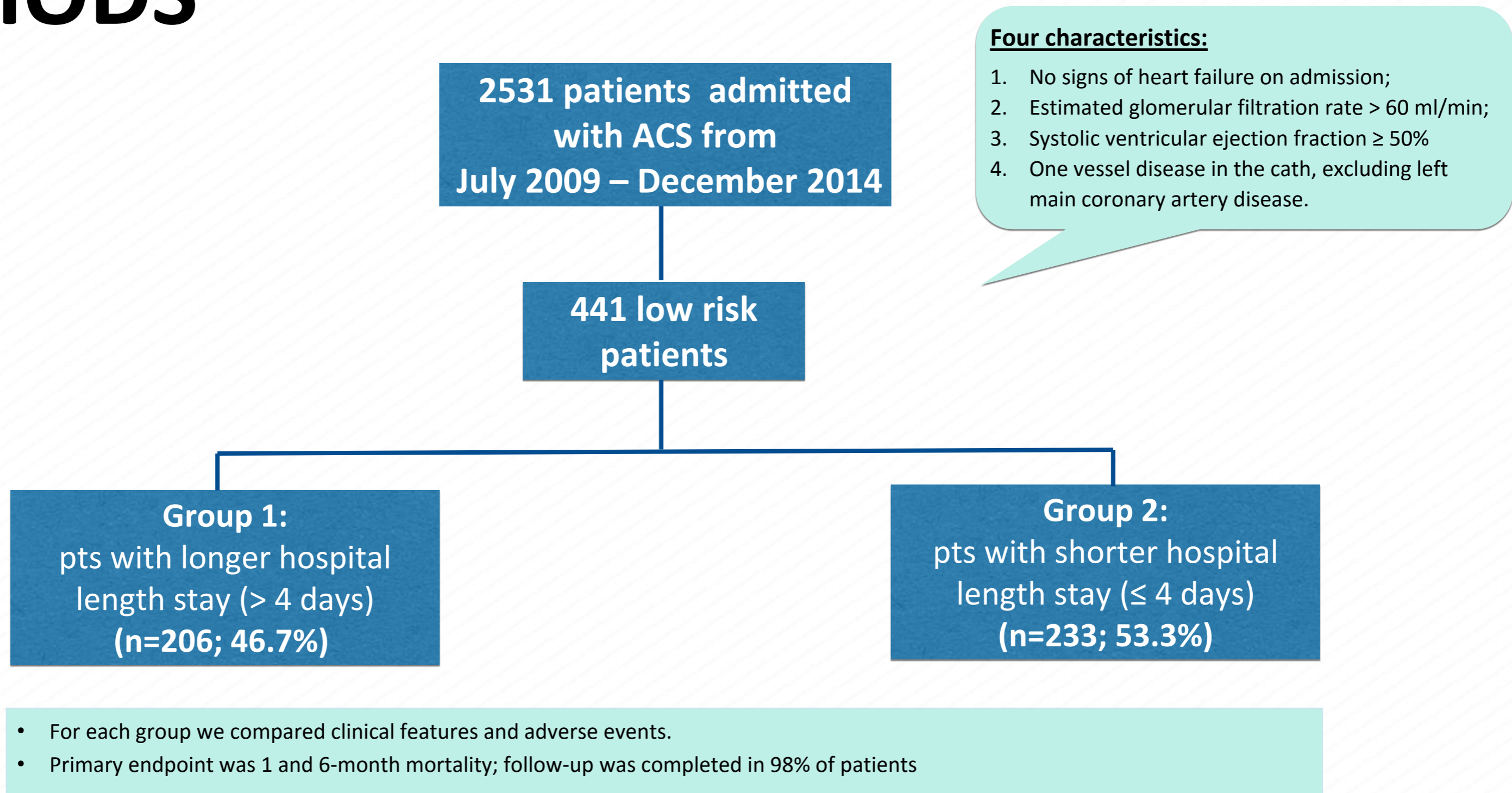
4. Newby LK, Califf RM. Identifying patient risk: the basis for rational discharge planning after acute myocardial infarction. *J Thromb Thrombolysis*. 1996;3:107-15.



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METHODS



RESULTS

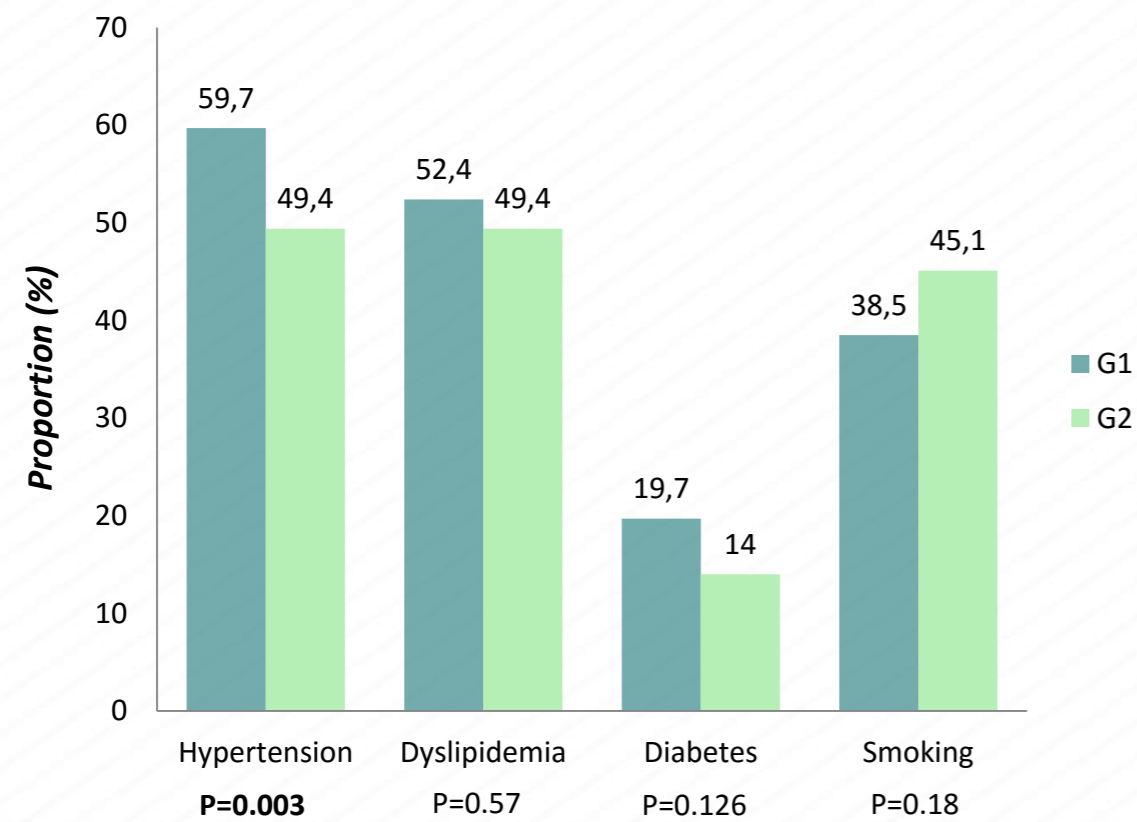
- **Baseline Patients' Characteristics on Admission**

	Hospital stay \geq 4 d	Hospital stay $<$ 4 d	<i>P</i>
Age (years)	59 \pm 11	56 \pm 11	0.002
Women (%)	18.7	14.5	0.25

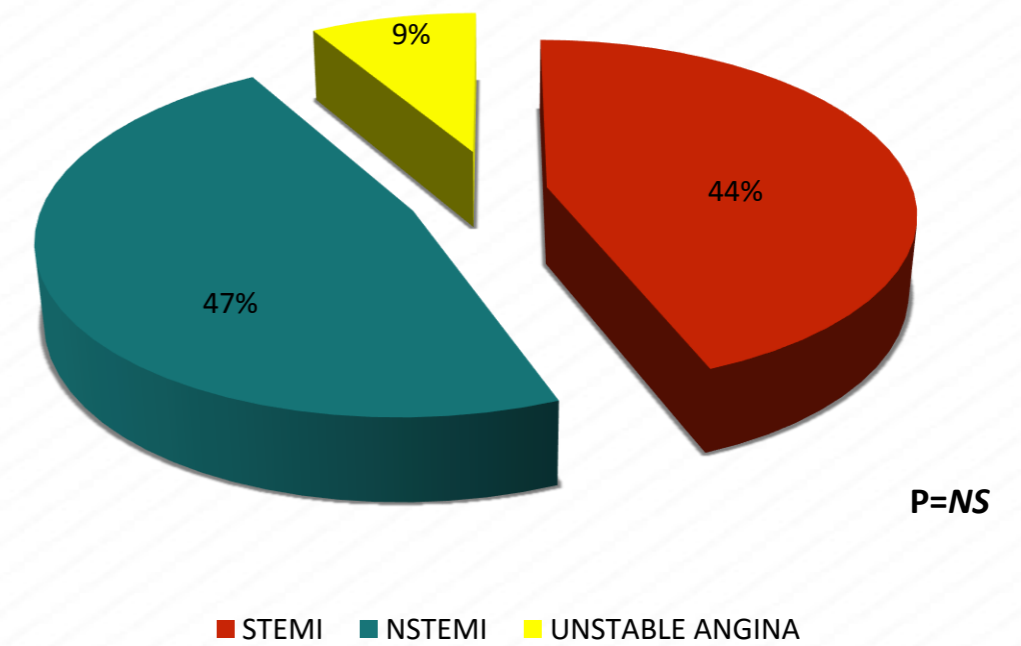
- **Previous History**

	Hospital stay \geq 4 d	Hospital stay $<$ 4 d	<i>P</i>
Atrial Fibrillation (%)	5.3	1.7	0.035
Previous Infarction (%)	8.7	6.0	0.36
Previous Stroke (%)	3.4	4.3	0.85

- **Cardiovascular Risk Factors**



- **Clinical Presentation**



RESULTS

• In hospital medical treatment and procedures

	Hospital stay ≥ 4 d	Hospital stay < 4 d	<i>p</i>
Aspirin (%)	99.8	100	0.22
Clopidogrel (%)	98.1	98.3	0.45
Beta-blockers (%)	91.8	89.4	0.42
ACE-Inhibitors (%)	84.1	89.4	0.09
Statins (%)	99.5	99.6	0.32
Inotropics (%)	1.4	0.0	0.103
Diuretics (%)	8.6	3.5	0.043
Nitrates (%)	18.3	11.5	0.059
Glycoprotein IIb IIIa inhibitors (%)	15.5	8.1	0.017
Revascularization (%)	84.1	89.4	0.121
CABG (%)	8.8	0.0	<0.001

• In hospital adverse events

	Hospital stay ≥ 4 d	Hospital stay < 4 d	<i>p</i>
Acute heart failure (%)	5.3	1.7	0.035
Reinfarction (%)	2.9	0.4	0.45
Ventricular arrhythmias (%)	4.3	1.4	0.63
New-onset AF (%)	5.8	2.6	0.096
High Heart block (%)	4.8	2.6	0.21
Contrast nephropathy (%)	25.1	19.2	0.16
≥ 2gr haemoglobin falling (%)	14.9	12.8	0.58
Respiratory infection (%)	1.5	0.4	0.34

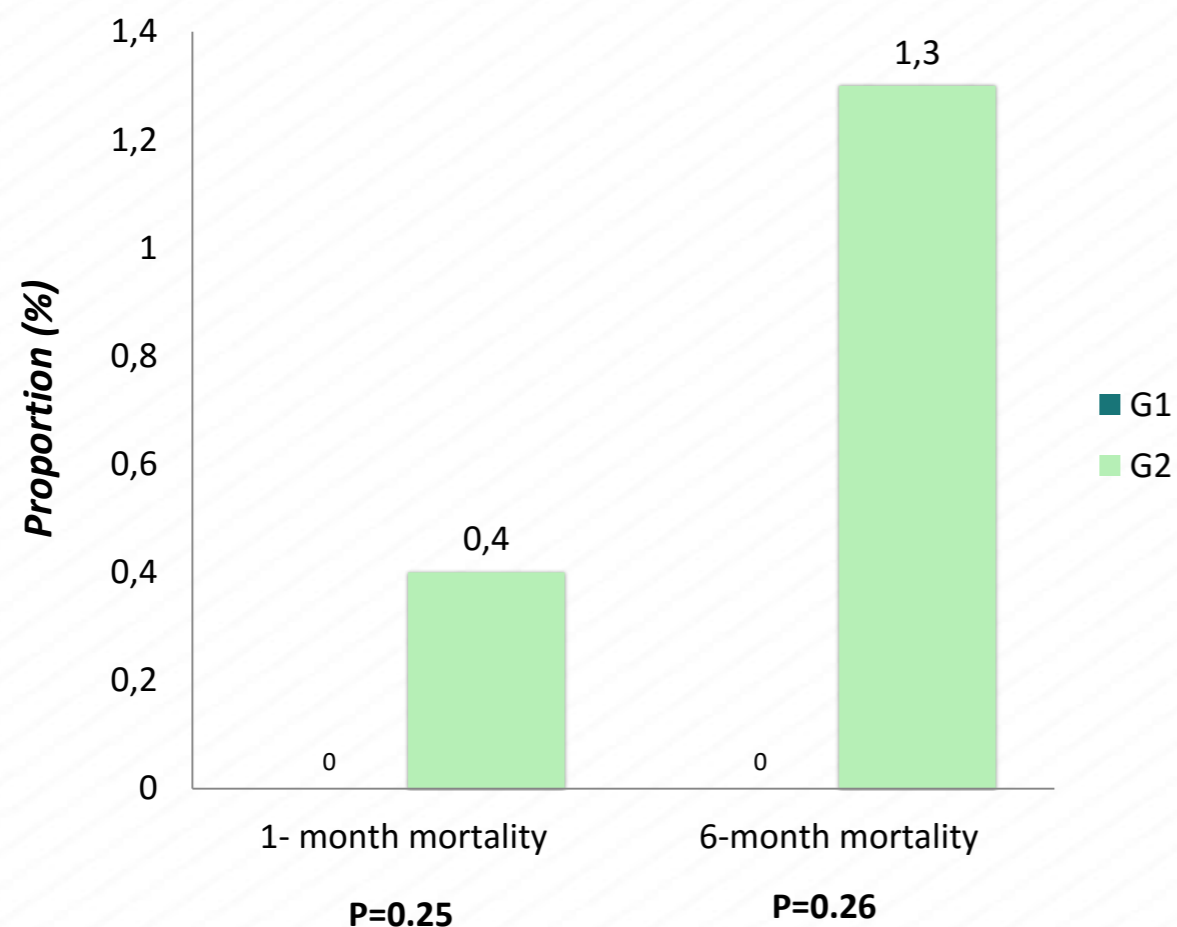


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RESULTS

• Mortality analysis



• Predictors of longer hospital length stay

Logistic Regression Analysis

Variables	OR	95% CI		P
		inferior	superior	
Age > 60 years old	2.06	1.32	2.23	0.002
Previous diagnosed AF	3.69	1.11	12.22	0.033
CABG	11.14	2.44	50.85	0.002
Glycoprotein IIb/IIIa inhibitors	2.30	1.17	4.52	0.016
Acute heart failure	2.39	0.69	8.22	0.167
Hypertension	1.38	0.87	2.18	0.17



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CONCLUSION

- Our low risk acute coronary syndrome patients were safely discharged after four days of hospitalization.
- Four days of hospital stay were necessary to introduce prognostic modification drugs, educate and promote changing in life styles.
- The predictors of longer hospital length stay identified were age > 60 years, previous diagnosed atrial fibrillation, performing CABG and treatment with glycoprotein IIb/IIIa inhibitors.

Limitations

- This was a single-center, retrospective analysis, subject to inherent selection biases and sample size-related statistical limitations.



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