Same Day Discharge post PCI in NSTEMI patients

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Overview

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- **1. Data on same day discharge**
- **2. Proposed draft protocol**

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Review

Same-Day Discharge After Percutaneous Coronary Intervention

Current Perspectives and Strategies for Implementation

Adhir Shroff, MD, MPH; Joel Kupfer, MD; Ian C. Gilchrist, MD; Ronald Caputo, MD; Bernadette Speiser, MSN, CCRN; Olivier F. Bertrand, MD, PhD; Samir B. Pancholy, MD; Sunil V. Rao, MD

JAMA Cardiol. 2016;1(2):216-223. doi:10.1001/jamacardio.2016.0148
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Table. Randomized Clinical Trials Comparing SDD With Overnight Observation After PCI

Source	Location	Sample Size	Access Site	Findings	Time to Discharge	Inclusion Criteria	Exclusion Criteria
Bertrand et al,[13] 2006	Canada	1005	Transradial	At 30 d, no difference in the primary composite end point between groups; 88% of patients assigned to SDD were discharged home the same day	4-6 h After PCI	Successful transradial PCI	ST-segment elevation MI within 72 h, ejection fraction ≤30%, transient vessel closure, hemodynamic collapse during PCI, femoral artery sheath, any other outside consideration precluding SDD, allergy or intolerance to aspirin or thienopyridines, INR >2.0, and contraindication to abciximab
Heyde et al,[14] 2007	the Netherlands	800	Transfemoral	No difference in the primary composite safety end point between groups; 19% of patients assigned to SDD were identified for extended observation	4 h After PCI	Elective PCI	Any of the following preprocedural factors: acute MI, unstable angina, ad hoc PCI, catheters >6F, long-term oral anticoagulant therapy, elective use of glycoprotein IIb/IIIa receptor blockers, residence >60 min from center, follow-up difficult to obtain, caregiver not present at home, and no transportation. Any of the following angiographic findings or occurrences: occluded coronary artery, suboptimal angiographic result, dissection type C to E, residual dissection after stent implantation, occlusion of major side branch, angiographic thrombus, no-reflow or slow-flow phenomenon, perforation with guidewire, persistent or recurrent chest pain, ECG changes, congestive heart failure, and complicated hemostasis after PCI. During observation period, patient must demonstrate lack of symptoms, absence of ECG changes, and no puncture-site abnormalities
Kim et al,[15] 2013	United States	298	Transfemoral	At 7 d, patients reported similar coping ability between groups; medication adherence and safety outcomes were also similar; significant patient preference for SDD	3 h After PCI	Elective PCI, age <75 y, type A or B coronary lesions, and vascular closure device	Recent ACS, ≥3 stents, femoral access is difficult, site has been used >2 times in the past, use of anticoagulants other than unfractionated heparin or bivalirudin, suboptimal angiographic outcome or clinical complications during PCI, PCI occurred in something other than a native coronary artery, angiographic evidence of thrombus, INR >2, and a platelet count <100 × 10^3/μL, hematocrit <25%, occlusion of major side branch during PCI of >1.5 mm, ejection fraction ≤30%, known allergy to PCI procedural medications, unable to ambulate with supervision at 4 h after procedure but before he or she is randomized into the study, evidence of vascular complications (eg, dissection, hematoma, or bleeding) pregnancy, periprocedural infection (eg, fever, pus, or swelling), chronic renal insufficiency (eg, serum creatinine level ≥1.5 mg/dL).
Carere et al,[16] 2000	Canada	100	Transfemoral	Following PTCA, patients' suture closure facilitated earlier discharge than manual compression (mean [SD], 7.1 [5.3] vs 15.5 [3.9] h); high complication rate in both groups; patients preferred closure	11 h After sheath removal	Elective or urgent coronary angioplasty with or without stenting if the operator believed SDD would be reasonable	Clinical evidence of peripheral arterial disease, preexisting femoral hematoma, serum creatinine level >1.70 mg/dL, and blood pressure >180/100 mm Hg

Source	Location	Sample Size	Access Site	Findings
Bertrand et al,[13] 2006	Canada	1005	Transradial	At 30 d, no difference in the primary composite end point between groups; 88% of patients assigned to SDD were discharged home the same day

2003-2005

66% presented with unstable angina

20% had +ve troponin

All given GpIIbIIIa bolus

4.8% access site haematoma

Time to Discharge	Inclusion Criteria	Exclusion Criteria
4-6 h After PCI	Successful transradial PCI	ST-segment elevation MI within 72 h, ejection fraction ≤30%, transient vessel closure, hemodynamic collapse during PCI, femoral artery sheath, any other outside consideration precluding SDD, allergy or intolerance to aspirin or thienopyridines, INR >2.0, and contraindication to abciximab

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An Audit of Outcomes After Same-Day Discharge Post-PCI in Acute Coronary Syndrome and Elective Patients

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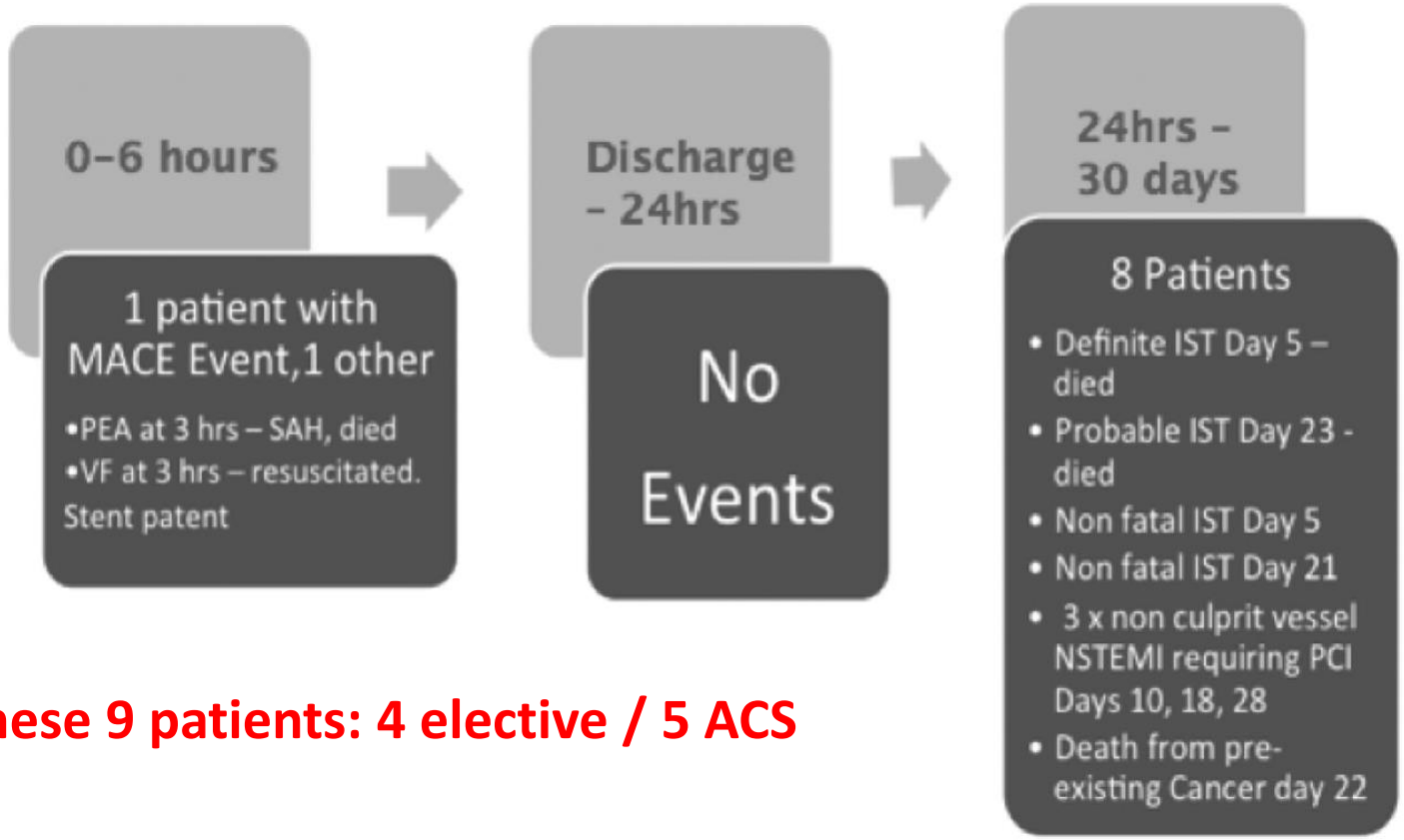
1059 patients
22% with NSTEMI
6% convalescent STEMI
[1.8% had LVEF <30%] [33% bifurcations, 3.5% LMS][98% transradial]

EARLY DISCHARGE AFTER PCI



Of these 9 patients: 4 elective / 5 ACS

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Table 1. Inclusion and Exclusion Criteria for Same-Day Discharge

Inclusions
Successful PCI: <20% residual stenosis with TIMI 3 flow
Accompanied by an adult at home after discharge
Transradial approach (preferred but not mandatory)
Exclusions
Presentation with STEMI within 72 hours of the PCI
Presentation with acute coronary syndrome within 24 hours of the procedure, otherwise ACS patients not excluded
Loss of side branch >1 mm in diameter
Significant no-reflow during the procedure
NHLBI Type B–F dissection in the target vessel at the end of the procedure
Intracoronary thrombus that arose during the procedure
Transient vessel closure during the procedure likely to precipitate significant infarction
On-going heart failure or LVEF <20%
Vascular access complication requiring in-patient hospital treatment or observation
Neurological event during the procedure
At the discretion of the attending cardiologist
Patient preference to stay overnight

PCI, percutaneous coronary intervention; TIMI, thrombolysis in myocardial infarction; STEMI, ST-elevation myocardial infarction; ACS, acute coronary syndrome; NHLBI, National Heart, Lung and Blood Institute; LVEF, left ventricular ejection fraction.

No MACE events observed beyond 3hrs post PCI

Inclusions

- At discretion of responsible Cardiologist
- Successful PCI* with no further inpatient procedures planned
- Clinical stability of symptoms, cardiac rhythm and haemodynamics for **4 hours** post PCI
- Screening echo performed (or planned as OP at discretion of responsible Cardiologist)
- Correct medical therapy established, TTO prescribed and patient educated
- Stage 1 rehab assessment performed
- **If risk of contrast induced nephropathy repeat bloods arranged with GP in 72 hours
- Cardiology follow up arranged
- Accompanied by an adult at home after discharge
- Transradial approach preferred

Exclusions

- < 72 hours post STEMI presentation
- < 24 hours post ACS presentation
- Neurological event during procedure
- Access site complication requiring inpatient treatment or observation
- Ongoing heart failure or LVEF < 20%
- Patient preference to stay overnight

DRAFT Protocol