



Outpatient, Transradial PCI - Same Day Discharge

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Philosophy

Patients who walk in for an elective outpatient diagnostic cardiac catheterization and require an interventional procedure (PCI), can be home the same day unless the interventional procedure was complicated or there are physical or social issues that would necessitate an overnight stay.

Decision for the same day discharge is based on uncomplicated procedural success: No acute closure, no uncovered dissection, TIMI-3 flow, and no procedural characteristics determining need to prolong post-procedural care. Individuals with no support system at home remain overnight in the outpatient observational unit.

Methods

Consecutive outpatients with stable coronary disease undergoing PCI with stent were reviewed using National Cardiology Data Registry (NCDR) data. Patients were offered Same Day Discharge, but were informed that overnight observation may be required pending the outcome of the procedure.



Background

Adverse thrombotic events have been reduced with improved stents and use of potent platelet inhibitors. With the increased use of transradial techniques have concurrently eliminated previous bleeding concerns.

Less than 5% of PCI patients in US were treated using the radial-artery access with a demonstrated 58% lower risk of bleeding than femoral approach PCI.

Demographics:

- 66.7 % male & 33.3 % female
- Ages: 06.4 % less than age 44
- 18.8 % age 45-54
- 31.4% age 55-64
- 24.2% age 65-74
- 19.3% age 75-80+

Results - PCI

Pre-treatment with high-dose clopidogrel or short infusions of IV platelet inhibitors were used in all patients (N=97 radial outpatients vs. 819 inpatients) along with antithrombin therapy. Currently, 57% of procedures in our hospital are radial, compared to less than 5% in all US hospitals. Transradial access with 5 or 6 French catheters were used with most scheduled *ad hoc* PCI. After 1 year from procedure with same day discharge complications identified were: four patients had hematoma at access site, six patients had loss of pulse (occluded radial artery), and 1 patient had inflammation at the access site requiring antibiotics. There were no readmissions due to cardiovascular changes including restenosis, CPK rises or EKG changes.

The outcome yielded high levels of patient/family satisfaction with no significant adverse events. The Observation Unit has received the "Highest Patient Satisfaction" Award in the hospital for the past 4 years.



Discussion

New data from recent research studies (EASY, PRESTO-ACS, STRIDE, EPOS, ACUITY, and PREVAIL) indicate that radial access is associated with reduced bleeding, is safe, and effective, even in complex lesions. The EASY Study resulted in a 50% reduction in medical costs. Above studies have shown this approach reduces bleeding, long-term mortality and ischemic events.

Significant advances in PCI and experienced team members at our institution have reduced the length of stay so that more patients are going home the same day.

Members of the Cath Lab pull the sheath and place a compression band on the access site while the patient is on the procedure table. Team members of the outpatient unit (HVOU) facilitate patients' ambulation ASAP and remove the compression band when hemostasis has been established. Patients need to be taking nutrition & fluids prior to discharge. Urine output is documented.

Nurse Practitioners play a key role to move the patient through this process safely and effectively. While patients are in the Observation Unit for recovery the Nurse Practitioner begins to address discharge information shortly after return. Patients are provided a full discharge packet to include stent, coronary Artery disease and angina information, medications instructions & prescriptions. Cardiac Rehabilitation referrals are made within the first 24 hours. Cardiology and Primary Care follow up appointments are made, all prior to the Same Day discharge to home. The Nurse Practitioner provides a continuity of care with: 1) Phone contact to confirm recovery status of patient, use of medications, and field any other comments or concerns 2) Respond readily to problems identified by Cath Lab Staff in their follow-up phone call surveys to patients done post -procedure.

Conclusions

Radial approach to outpatient stent placement provides an efficient approach in select patients. With shorter outpatient stays, high occupancy outpatient units can operate more efficiently without patient dissatisfaction and patients are exposed to less hazards of hospitalization. The Nurse Practitioner involved in post procedural teaching to the patient and family and discharge follow up facilitates the success of the Same Day Discharge process. Involvement of all staff towards ensuring quality care in recovery and discharge education is improving outcomes and patient satisfaction.

References

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Admission

Aspirin
325 mg

Clopidogrel
Load

>2 hrs
<2 hrs
none

Procedure
No GPI
Bolus
GP IIb/IIIa

Platelet Inhibitor Infusion

Time Line

80 [60, 100] minutes
(includes diagnostic, too)

360
minutes

Discharge

6.5 [5.8, 7.0] hours
 No early MACE
 No late bleeding
 No patient complaints
 No CPK ↑