Same Day Discharge versus Overnight Stay in Patients Undergoing Elective Percutaneous Coronary Intervention: A Pilot Project
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Introduction

• This pilot project focused on implementing a same day discharge (SDD) protocol after elective, uncomplicated percutaneous coronary intervention (PCI) at a community hospital in northern New Jersey.
• The Society of Cardiovascular Angiography and Interventions (SCAI) released recommendations supporting SDD as a safe and feasible alternative to overnight stays (Seto et al., 2018).
• SDD was occurring at this facility without a protocol to guide the discharge assessment process.

Background and Significance

• With only 26% of interventional cardiologists in the United States routinely implementing SDD after elective PCI, there is a need for more widespread and uniform use of an SDD protocol (Seto et al., 2018).
• Approximately 600,000 PCI procedures are performed in the U.S. annually and more than half are elective procedures (Amin, et al., 2018).
• Traditionally, ONS was considered necessary but with improved stent delivery and technology, complications occur at rates of 0.05-0.1% (Manda & Baradhi, 2018).
• SDD protocols improve patient safety by ensuring comprehensive assessment of discharge criteria (Seto et al., 2018).

Aim & Objectives

• This project aimed to implement a SDD protocol after elective PCI that adhered to the 2018 SCAI recommendations at a community hospital in northern New Jersey.

Objectives

• Developed a SDD checklist based on the 2018 SCAI recommendations as a guide for SDD after elective PCI.
• Determined whether the SDD checklist improved screening and assessment of post PCI patients.
• Analyzed the results to determine if there was a correlation between SDD or ONS and the occurrence of adverse cardiovascular events within 30 days of the procedure.
• Assessed patient satisfaction, perception, and comfort with being discharged the same day both before discharge and within 24 hours of the procedure.
• Evaluated staff perceptions of the SDD discharge protocol and identified any barriers to SDD implementation.

Methodology

Project Design

• Quality improvement design focusing on improving the SDD process and assessment

Setting

• 255 bed community hospital in northern New Jersey, performs approximately 1,000 cardiac catheterizations annually; approximately half are elective PCIs.

Project Population

• People who had elective, uncomplicated PCI;
• Age 18 and older;
• Met the 2018 SCAI criteria for SDD.

Intervention

• Implementation of a SDD protocol based on the 2018 SCAI recommendations. Participant identification using a SDD checklist.

Results

Same Day Discharge Checklist

<table>
<thead>
<tr>
<th>Patient Setting</th>
<th>SDD Group</th>
<th>ONS Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>No</td>
<td>0%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Patient Satisfaction and Readiness for Discharge

• All participants in each group responded “excellent” when asked about their overall catheterization laboratory experience.

Patient satisfaction was equal and excellent in both groups, regardless if they had a SDD or an ONS. These findings contradicted the results of Chen, Lim, and Marshall (2019) who found an increase in patient satisfaction in the SDD group.

An unintended result of the 24-hour follow-up surveys was the requests by participants for additional education about medications.

This information helped to re-structure the way discharge instructions are presented after PCI.

Adverse Cardiovascular Events

No participant experienced any adverse cardiovascular event or readmission within 30 days supporting the safety of SDD when compared to ONS.

Discussion

Clinical Practice

Potential to re-structure card catheterization laboratory practice to include the routine use of SDD

• There were no adverse cardiovascular events in either group supporting the safety of SDD when criteria is met.
• All participants agreed they would have preferred a SDD if able.
• Based on this information, SDD has the potential to improve the perception of quality care received by patients when SDD is clinically feasible after PCI.

Potential for Future Research

• Recreate similar study with a larger sample size to generalize findings.
• Further research into provider resistance to SDD despite research supporting it’s safety and efficiency.

Conclusion

• At a community hospital in northern New Jersey, SDD was occurring without a protocol to guide the process. This pilot project implemented a SDD protocol to guide the SDD process as well as standardize eligibility criteria and discharge assessment.
• There were no participants who experienced adverse cardiovascular events in either ONS or SDD groups. This supports research findings that SDD is a safe alternative to ONS in an uncomplicated, elective PCI (Amin et al., 2018; Seto et al., 2018).
• Participants in both groups were overall satisfied with their care and preferred SDD if given the opportunity (Alyasin et al., 2016).

Further research into provider readiness to SDD despite research supporting it’s safety and efficiency.

• The results of the project were not statistically significant, they do show potential for SDD protocol implementation and possible further research with a larger sample size.

References


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