Early Utilization of the 6-Minute Walk Test (6MWT) in an Active Patient after Cardiac Surgery - A Case Report

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Unique
- The 6-Minute Walk Test (6MWT) is a functional outcome measure that is easy to implement and has been used across multiple populations.
- There is limited literature that has investigated the use of the 6MWT on post-operative day one (POD1) after cardiac surgery.

Purpose
- To investigate the use of the 6MWT as an outcome measure POD1 in a patient after cardiac surgery who participated in a self-exercise pre-op program.

Foundation
- Coronary artery disease affects more than 13 million Americans.1
- Sub-population of these patients, despite exercising regularly, can develop cardiac disease.
- Patients participating in self motivated exercise programs prior to surgery are found to excel with early utilization of the 6MWT.2
- For this active sub-population the 6MWT on POD1 may be a more specific and sensitive outcome measure.

Description
- A 68-year-old male underwent an uneventful three vessel coronary artery bypass surgery.
- He participated in a walking program for a year; two months prior to surgery his walking became limited to 20-minutes a day due to angina.
- After cardiac surgery, the patient was seen 2x/day for 3 days with discharge on the morning of POD4.
- 6MWT, RPE Scale, and FIM scores were administered in the SICU on POD1 and POD3.
- Cardiac rehabilitation focused on progressive and intensive therapeutic exercises and functional mobility training.

Interventions

| POD1 | • x10reps  
| • Supine (am), Sit (pm) |
| POD2 | • x10-15reps  
| • Sitting |
| POD3 | • x15-20reps  
| • Standing |

Observations

FIM Scores
- Supine to Sit 4  
- Sit to Standing 6  
- Static Standing 6  
- Ambulation 6

Conclusion
- The use of the 6MWT was found to be an excellent indicator of exercise capacity and readiness for discharge.
- The pre-op exercise program was believed to have been a major factor in the patient’s uneventful and fast recovery.
- Future studies should assess the use of the 6MWT within a day of extubation in a larger population of patients who are more active prior to surgery in order to be more specific with rehab direction & allocation of resources.

Acknowledgements
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Outcome Measures

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<tr>
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<th>Admission</th>
<th>Discharge</th>
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<tbody>
<tr>
<td>6MWT (meters)</td>
<td>165.20m</td>
<td>193.85m</td>
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<tr>
<td>RPE (Borg Scale 6-20)</td>
<td>12</td>
<td>8</td>
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<tr>
<td>HR during 6MWT</td>
<td>80-90bpm</td>
<td>75-85bpm</td>
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References
guide/heart-disease.