Restoring Functional Mobility Following a Ruptured Abdominal Aortic Aneurysm: A Case Report
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Background & Purpose

- An abdominal aortic aneurysm (AAA) is a dilation of the abdominal aortic artery greater than three centimeters involving all layers of the vessel wall. There are two surgical options for treatment of AAA: open repair and endovascular aneurysm repair (EVAR).
- An endoleak is a complication following EVAR when blood leaks into the aneurysm sac.
- A type III endoleak occurs when there is a defect between the abdominal aortic artery greater than three centimeters from the AAA.
- The purpose of this case report was to describe the physical therapy (PT) plan of care of an elderly patient following open repair of a ruptured AAA with a history of EVAR.

Timeline

- Days 3-9
  - Progress note reassessment: manual muscle testing, Berg Balance Scale, Timed Up and Go tests completed
- Days 11-12
  - Interventions including: gait training with and without an assistive device
  - Discharged from SNF to home

Interventions

- Gait Training
  - Ambulating with a 2 wheeled-walker
  - Ambulating without a 2 wheeled-walker
  - Ambulating on various surfaces
  - Ascending and descending stairs

- Strength Training
  - Supine leg strengthening exercises
  - Seated leg strengthening exercises
  - Standing leg strengthening exercises

- Balance Training
  - Static staggered stance
  - Dynamic bilateral and unilateral stance
  - Stepping over obstacles
  - Dynamic reaching outside the base of support

Outcomes

- Test
  - Initial Evaluation
  - Discharge
  - Timed Up and Go:
    - Initial Evaluation: 25.29 seconds
    - Discharge: 16.74 seconds
  - Berg Balance Scale:
    - Initial Evaluation: 34/56
    - Discharge: 37/56

Discussion & Conclusion

- At discharge, the patient displayed improvements in her lower extremity strength, and static and dynamic balance. These findings are consistent with the current literature that suggests using resistance and balance training following cardiac surgery in elderly patients.
- The primary take-away of this case report is PT interventions designed to address the specific impairments and goals of the patient following an open repair of ruptured AAA could potentially lead to improvements in both strength and balance.
- Due to the rarity of this specific case, large-scale studies are unlikely, however, there is a need for future research into the role of PT for this population in general.

Case Description

- Retired 86 year-old female, lived independently with some assistance from family members and a housekeeper
- Suffered a fall six months prior, but returned home after hospitalization and rehabilitation
- Spent ten days in the hospital following open aortic biliac repair of ruptured AAA and explant of Endologix endograft with intraoperative resuscitation

References