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PTA 2540

Oncology Part 2 assignment

The patient has a goal of standing and ambulating independently for at least 1000 feet. Currently patient is able to use walker to come to standing from sitting and needs a walker to assist in ambulation. The patient needs exercises to help address her goals. She is showing decreased muscle strength, impaired cardiopulmonary endurance, balance deficits (most likely a cause of impair muscle weakness and decrease ability to complete ambulation without walker and ability to complete functional activities without assistance. Interventions will be given to the patient to work on improving areas of weakness. A home exercise program will also be given to encourage patient to increase strength, endurance and functional ability in between clinic visits.

Interventions: focus on using patients own body as resistance and work on repetition with the patient.

- Bridges: to strengthen hip extensors. Can be completed with both feet on the ground and lifting the buttocks off surface of the table. The Patient can go against some resistance of the therapist pushing or lifting the pelvis through the ROM. If patient has difficulty, they can receive some active assistance from the therapist. As the patient gets better, I can be progressed to a single legged bridge.
- Practicing sit to stands while taking away the walker to help patient to be able to complete independent standing and to increase lower extremity strengthening. Once standing the patient can do some partial squats (wall slides) then moving to a small to larger ball behind the back.
- Gait training on a treadmill: if needed the patient can have some weight bearing reduced with a body support system. As the child is able to pick up speed and to gain longer stride length the amount of weight the system is holding can be reduced until the patient is able to bear all weight and able to walk without the assistance of the walker. The patient would then be able to increase cardiovascular endurance and increased muscle strength to gain ability to ambulate further distances.
    - If not working on a treadmill, have the patient work on climbing stair activities, or kicking and walking in a pool adding games to the task.
- Knee extensor strengthening and hip flexor strengthening for improved sit to standing and standing tolerance to decrease need for walker for assistance. Activities could be step ups, partial squats, straight leg raises, short or long arc quads.
    - Patient could also work on these same muscles by pushing themselves backwards with LE on a wheeled chair, using a bicycle, kicking activities or using a swing and using legs to pump instead of being pushed.
- Focusing on ROM and strength of the ankle to allow for good heel strike and toe off during ambulation to assist patient in improving stability and power. The patient can be manually stretched if there are tight muscles. Heel walking or toe walking can be performed.

    - Other exercises to give patient something fun to do, tapping foot to the beat of music. Drawing with feet (using shaving cream and food coloring to make a picture. Spelling words with their foot.
    - Both dorsiflexors and plantar flexors can be strengthened doing this.
- Patient may lose balance and may have strength deficits because of weak hip muscles. The patient can complete activities by squeezing a ball between their legs or side stepping.
    - Ways to encourage child to perform activities focusing on the same muscles: racing around obstacle course while holding ball between legs starting over if dropped. Side stepping on balance beam or uneven surface to improve anticipatory or reactionary balance control.
- As the patient progresses the patient could be timed for the obstacles to see if they can get better times. Add in more obstacles that uses the patient's body weight to make more difficult.

The patient needs to adhere to a Home exercise plan that is engaging and will allow her to improve her endurance and strength.

- If a pool is close and readily available a great benefit to keep a child active and engaged could be participating in swimming and aquatic activities. The child will get to play and work against the resistance water provides. The patient could use a kick board or pool noodle even a life jacket and different kicks could be performed to work on different muscles. Activities at the side of the pool could be done to work on PF and DF strengthening. This does not need to be every day but could be incorporated into the HEP throughout the week to break up some of the same land-based therapies.
- The child could be asked to help out with daily chores. Cleaning, folding laundry, prepping food to be cooked or even crafts. To get the child working on constant sitting to standing exercises objects needed to complete the task would be placed far enough away that when she needed them she needs to stand up to get them, thus working on LE strengthening without it being seeming like she is taking time out to exercise.
- Games of red light green light to improve ambulation.
- Kicking a soccer ball or kick ball at a goal for a specific amount of time. Switching feet to improve knee extension and single leg stance.
- Walking over obstacles, increasing distance or height of objects needing to be stepped over.
- Popping bubbles with feet while standing before they hit the ground to improve single leg stance.
- Since balance would most likely be an issue, the patient could be given a tricycle or a bike with training wheels and allow time each day to ride her bike to improve LE strengthening and improve cardiovascular conditioning.
- Patient could be given a therapy ball with handle to allow the patient to bounce using LE. Patient could also be given a trampoline to jump that has a bar attached to be able to continue using UE support until sufficiently strong enough to do so without support.