

Physical Therapy Intervention for an Elderly Patient with Comorbidities following Surgical Fixation of a Femoral Neck Fracture: A Case Report



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Background

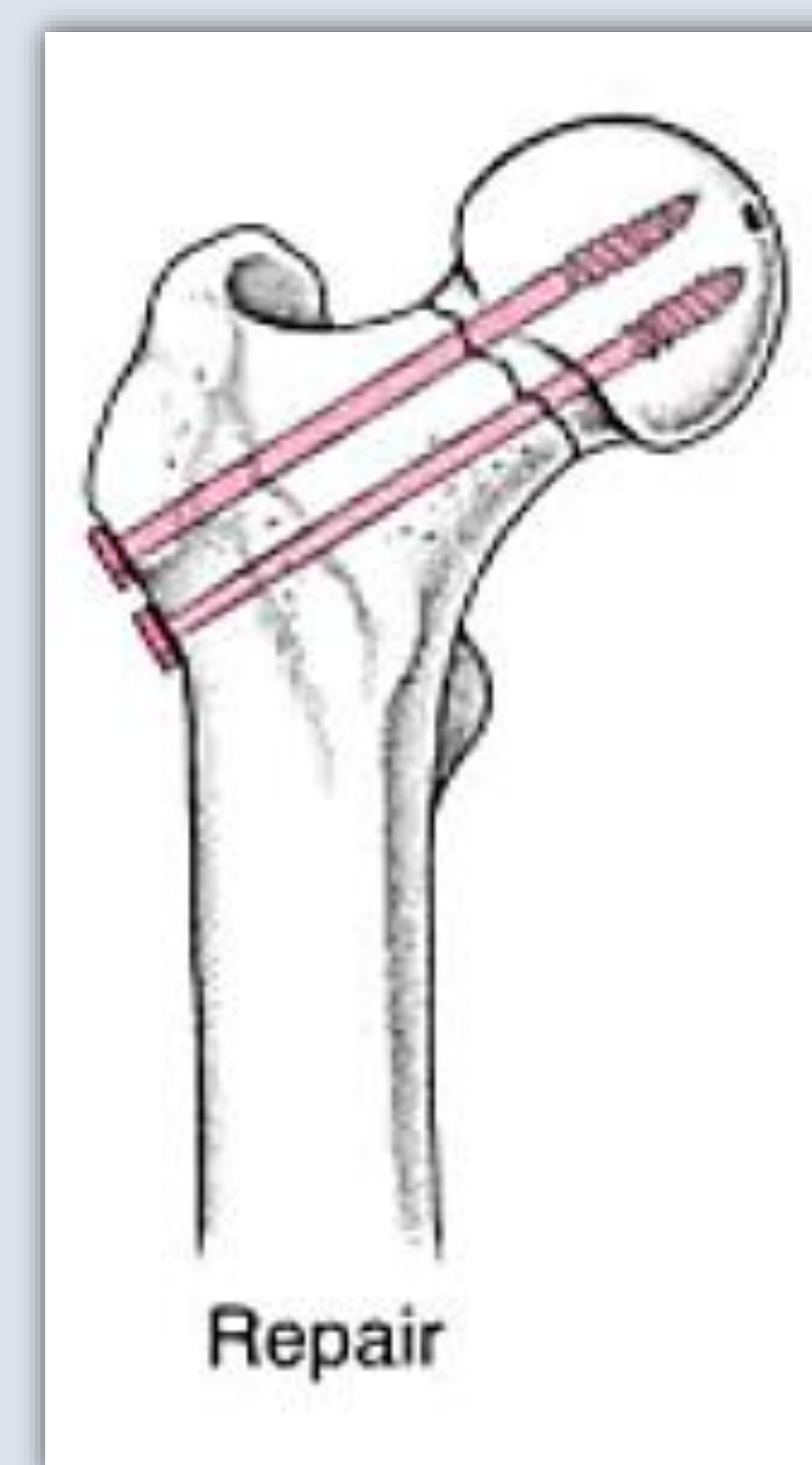
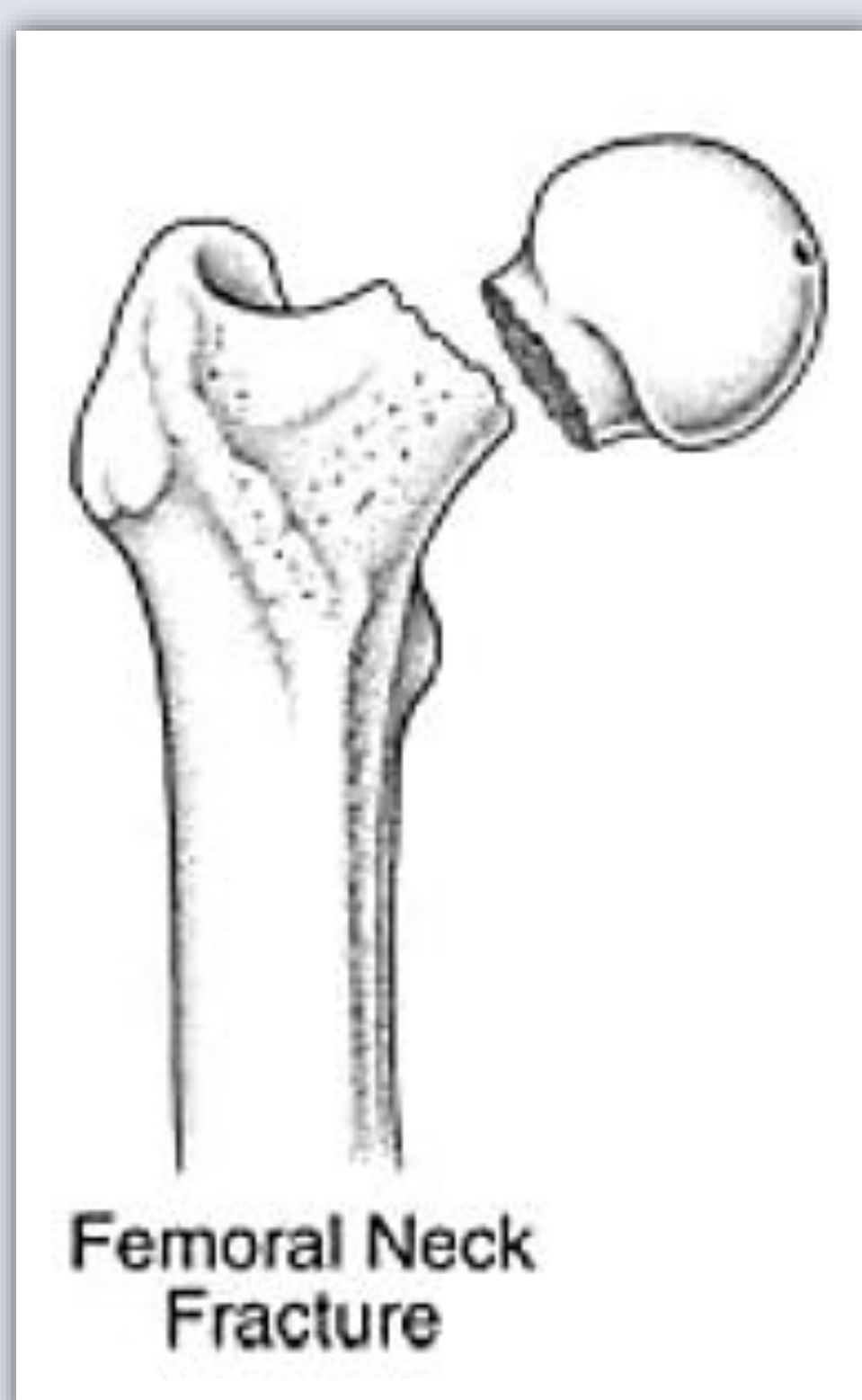
- More than 300,000 elderly people over age 65 required hospitalization due to hip fracture in 2016.
- More than 95% of hip fractures are the result of falls.
- Strength training programs are suggested for geriatric patients with surgical fixation following hip fracture.¹
- Returning to prior level of function and quality of life is the primary goal of rehabilitation for geriatric patients recovering from a hip fracture.²
- Complex comorbidities such as heart failure, diabetes, and extensive medical history will lead to a poor prognosis for recovery.^{3,4,5}
- Literature is limited on adverse responses or hardware failure in physical therapy patients following open reduction internal fixation (ORIF) of hip fracture.

Purpose

The purpose of this case report was to document PT intervention in the recovery process of an older patient with complex comorbidities following ORIF of right femoral neck fracture.

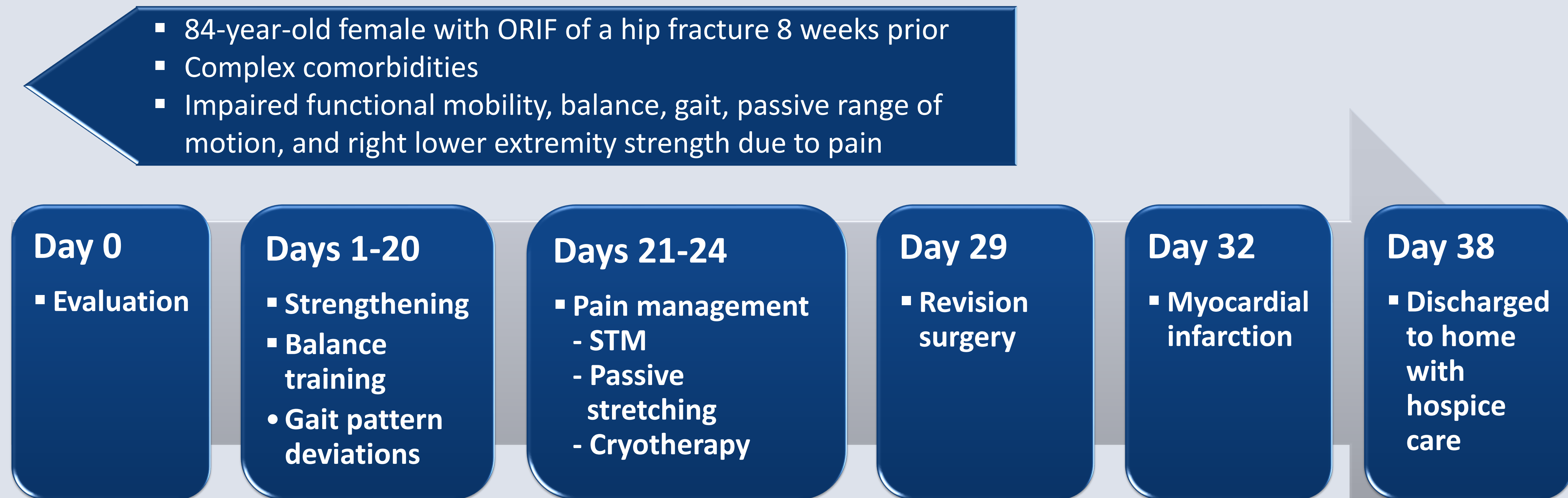
Patient Description

- An 84-year-old Caucasian female with right femoral neck fracture secondary to a fall
- S/p open reduction internal fixation of right hip fracture 8 weeks prior
- Complained of constant pain at the right hip after surgery
- Complex co-morbidities including heart failure, renal failure, type II diabetes, bilateral lower extremity (LE) edema, hyperlipidemia, hypertension, history of metabolic disease, obesity, hypothyroidism
- Ambulated with front-wheel walker (FWW) with flexed trunk, antalgic gait pattern, and frequent breaks; no assistance required
- Participated in outpatient PT for 1-2X/week for 6 weeks

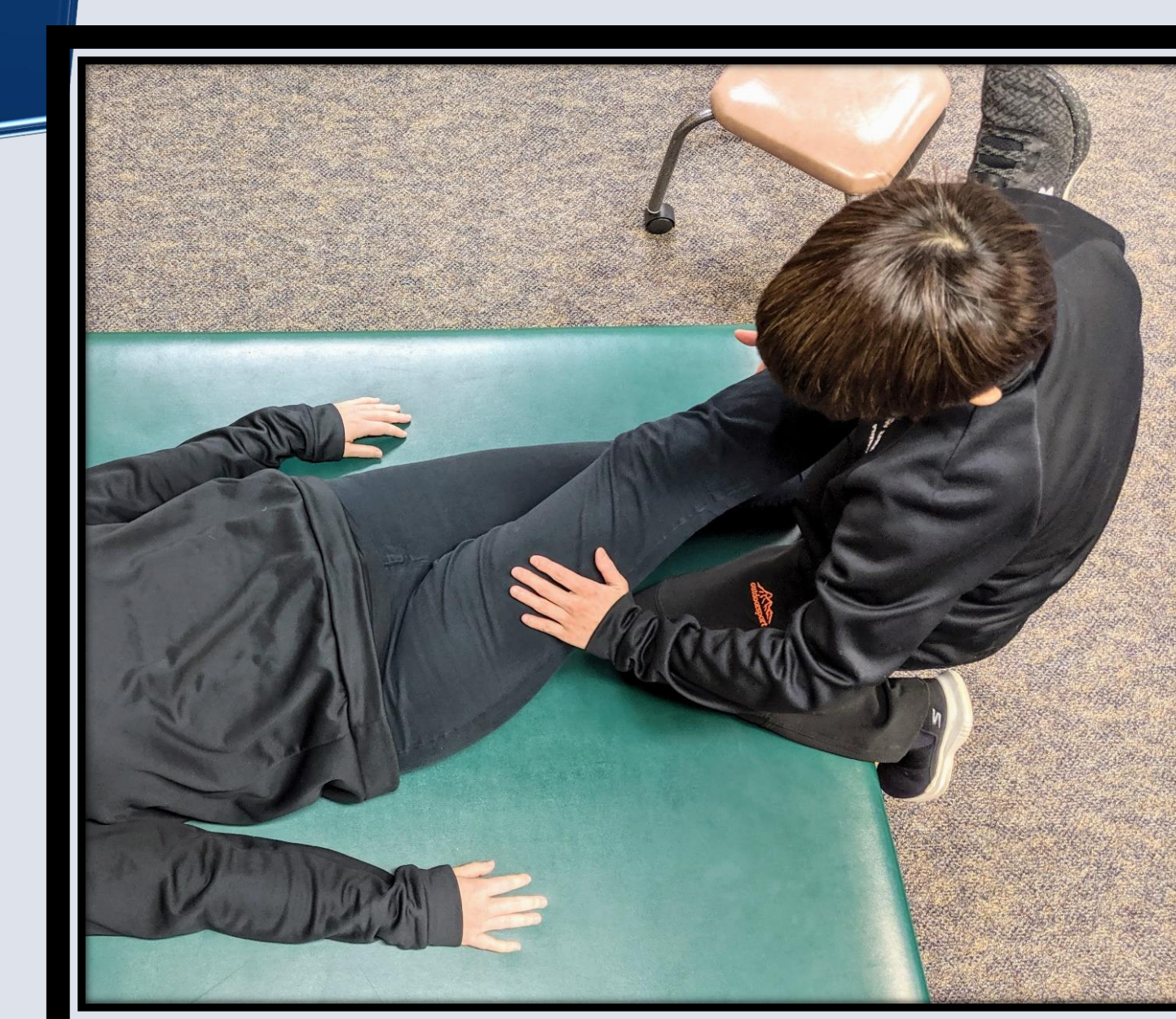
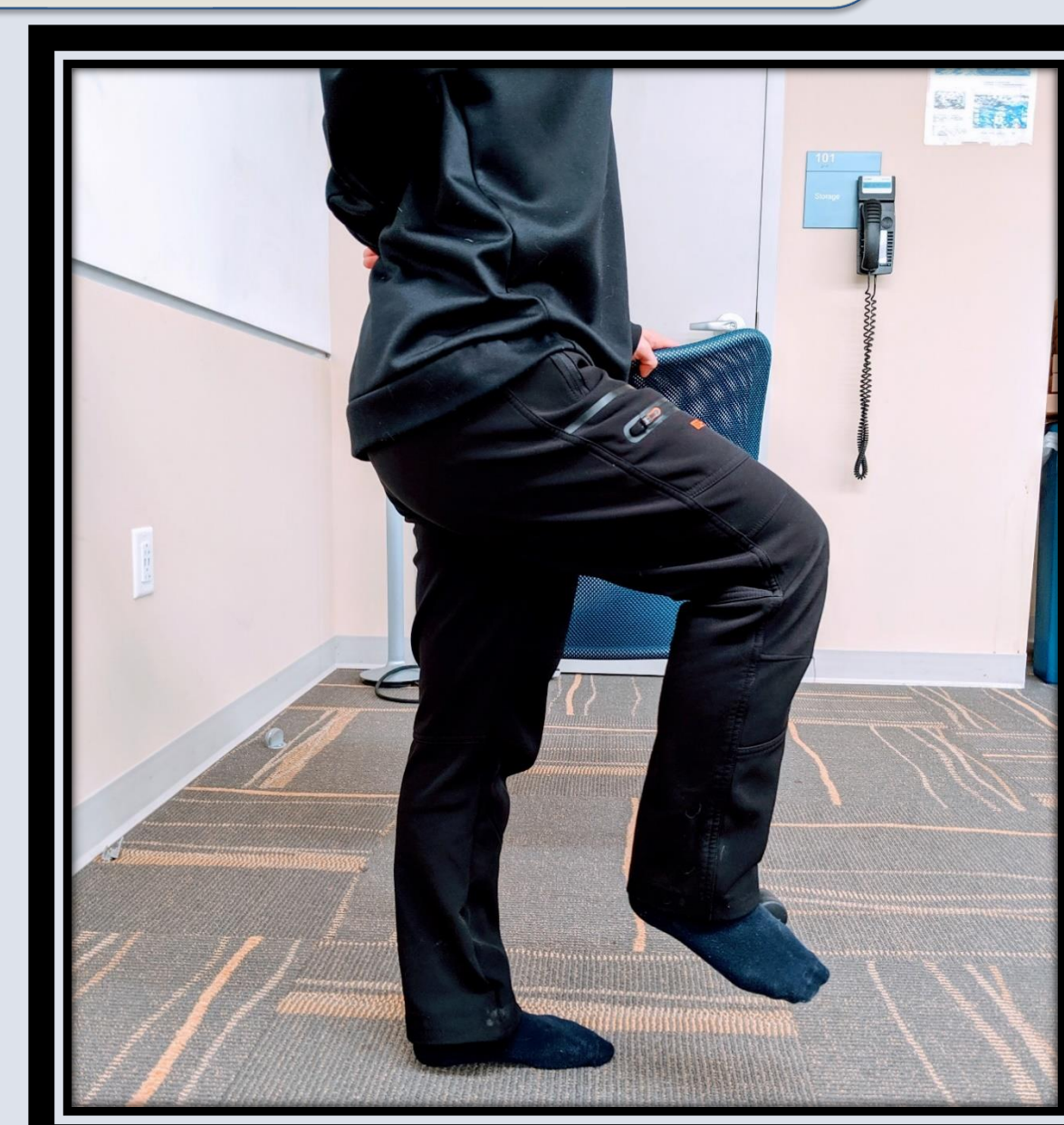
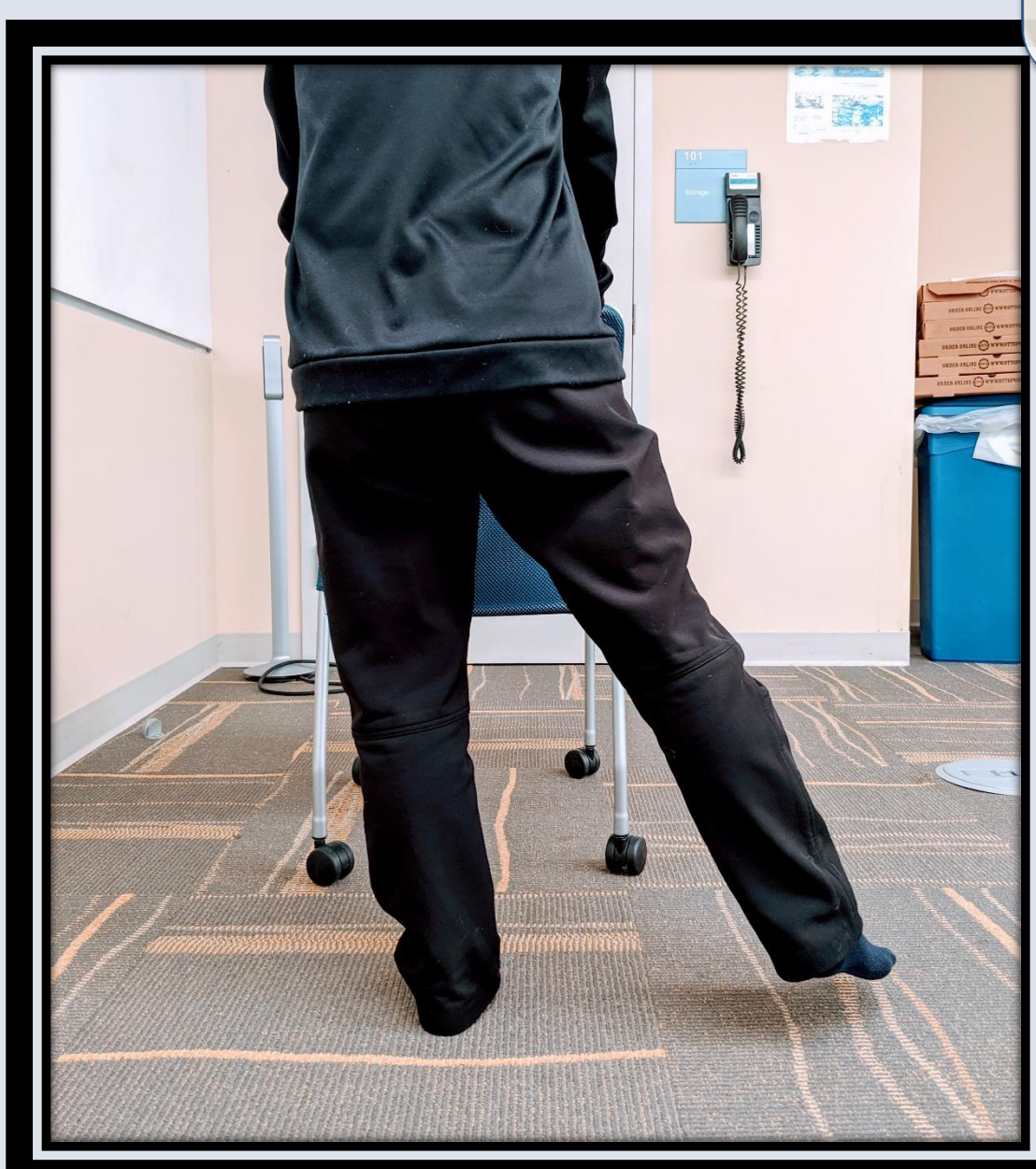
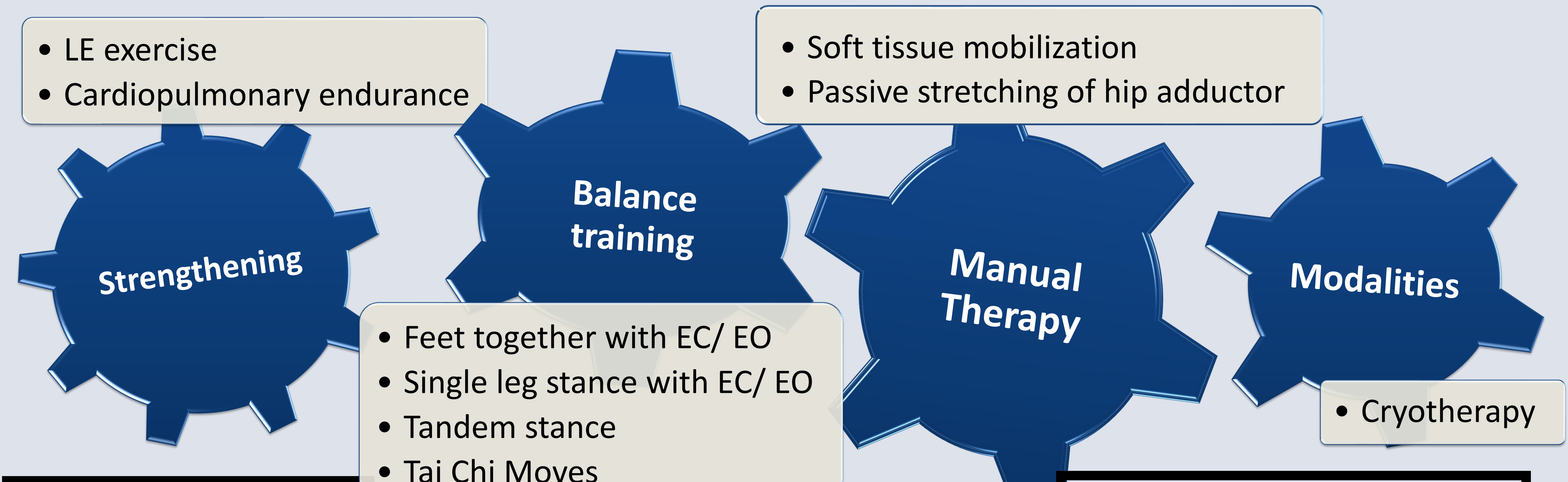


Short-term Goals (3 weeks)	Status upon last visit
▪ Patient will be able to complete her HEP twice daily for improved strength and functionality.	Met
▪ Patient will be able to ambulate with FWW for 10 min for community ambulation.	Not met
Long-term Goals (6 weeks)	Status upon last visit
▪ Patient will be able to perform housework for 1 hour independently.	Not met
▪ Patient will be able to ambulate for 15 min with single-base quad cane.	Not met
▪ Patient will have improved LEFS score > 32/80 for improved ADLs.	Not met

Timeline



Interventions



Outcome			
Test & Measure		Initial evaluation	Upon last visit
Balance	Romberg	> 30 sec with minimal sway	> 30 sec with minimal sway
	Sharpened Romberg	< 10 sec on both LE	> 30 sec with minimal sway
LEFS		12/80	19/80
NPRS	Rest	0/10	2-3/10
	Ambulation	5/10	4-5/10
Gait pattern		Ambulated with FWW; antalgic gait pattern; frequent break	Same condition with increased resting time, labored breathing, decreased hip extension

FWW: front wheel walker; LEFS: Lower Extremity Functional Scale; NPRS: Numeric pain rating scale

Conclusions

- Unable to obtain the final outcome measure for strength and PROM as the pt was lost to f/u after the last PT visit
- Improved LEFS but not reaching the MCID value
- Improved Romberg and sharpened Romberg balance tests
- Pain level showed no change during activities and worse at rest
- Increased cardiopulmonary demand during ambulation
- No improvement in gait pattern
- Developed bilateral LE edema
- PT failed to detect the adverse response to PT treatment.
- Limited literature on hardware malfunction induced signs and symptoms.

f/u: follow-up; MCID: minimal clinically important differences; PROM: passive range of motion; pt: patient

Acknowledgements

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