



# Joint Mobilizations and Paraplegia: A Curious Pairing

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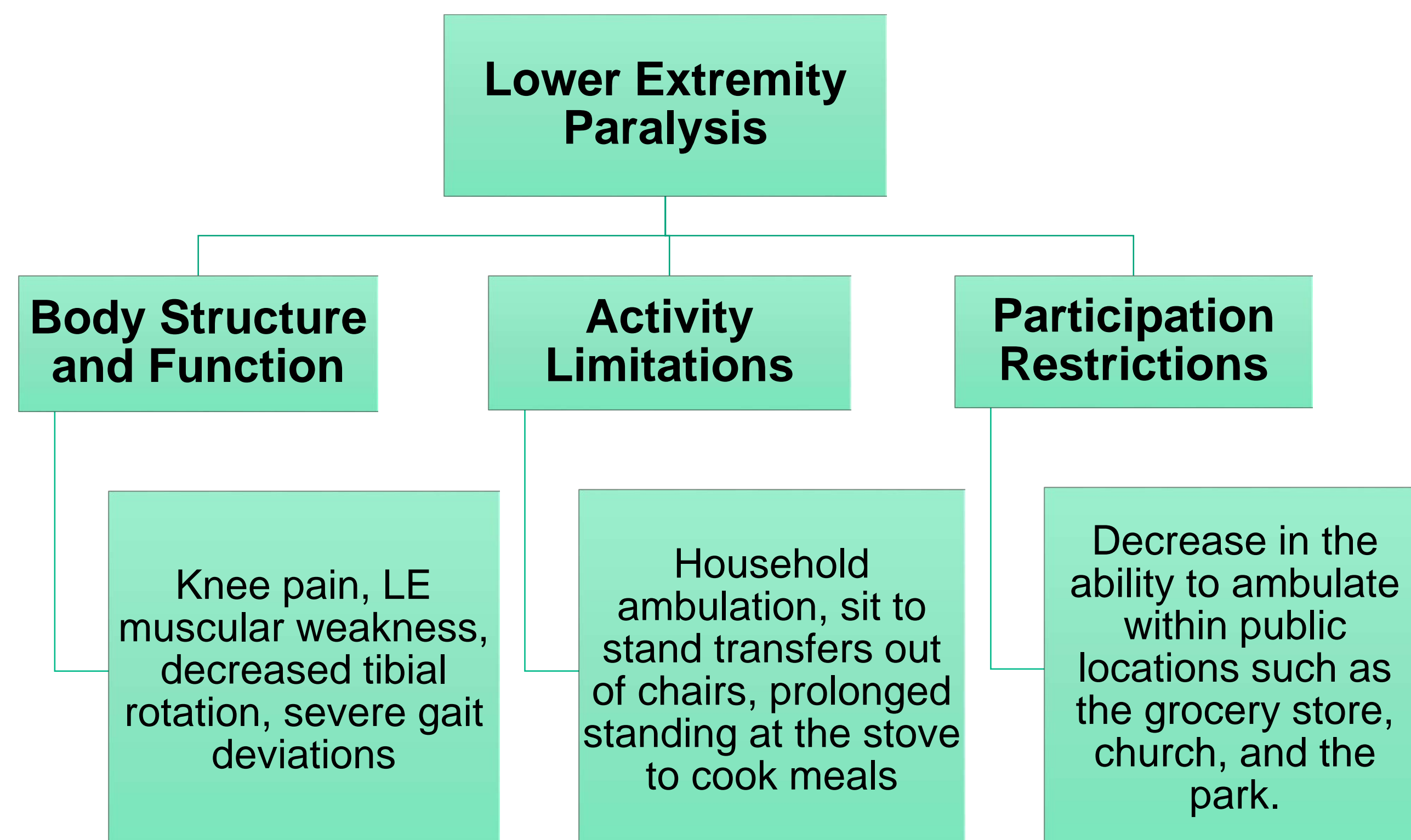
## BACKGROUND AND PURPOSE:

- ◆ Ambulatory patients with paraplegia demonstrated mild to severe gait abnormalities.<sup>1, 2</sup> This puts patients at increased risk for the development of degenerative joint changes.<sup>3</sup>
- ◆ Joint mobilization techniques have shown to be successful with the management of osteoarthritis.<sup>3-6</sup>
- ◆ The purpose of this case report is to explore the effectiveness of joint mobilizations at the knee on gait and pain in a patient with ambulatory paraplegia.

## CASE DESCRIPTION:

- ◆ 89-year-old male with resultant bilateral paralysis of the lower extremity secondary to an epidural steroid injection four years prior.

The *International Classification of Functioning, Disability and Health (ICF)*



## METHODS:

Table 1 – Intervention List

Manual Technique	Weeks 1-3	Weeks 4-6	Weeks 7-8
Internal rotation of the femur with relative tibial external rotation at end range knee extension (Figure 1)	Grades I – IV	Grade I – III	Grades I and II
Tibial femoral distraction with AP/PA glides (Figure 2)	Grades I and II	Grades I and II	Grades I and II

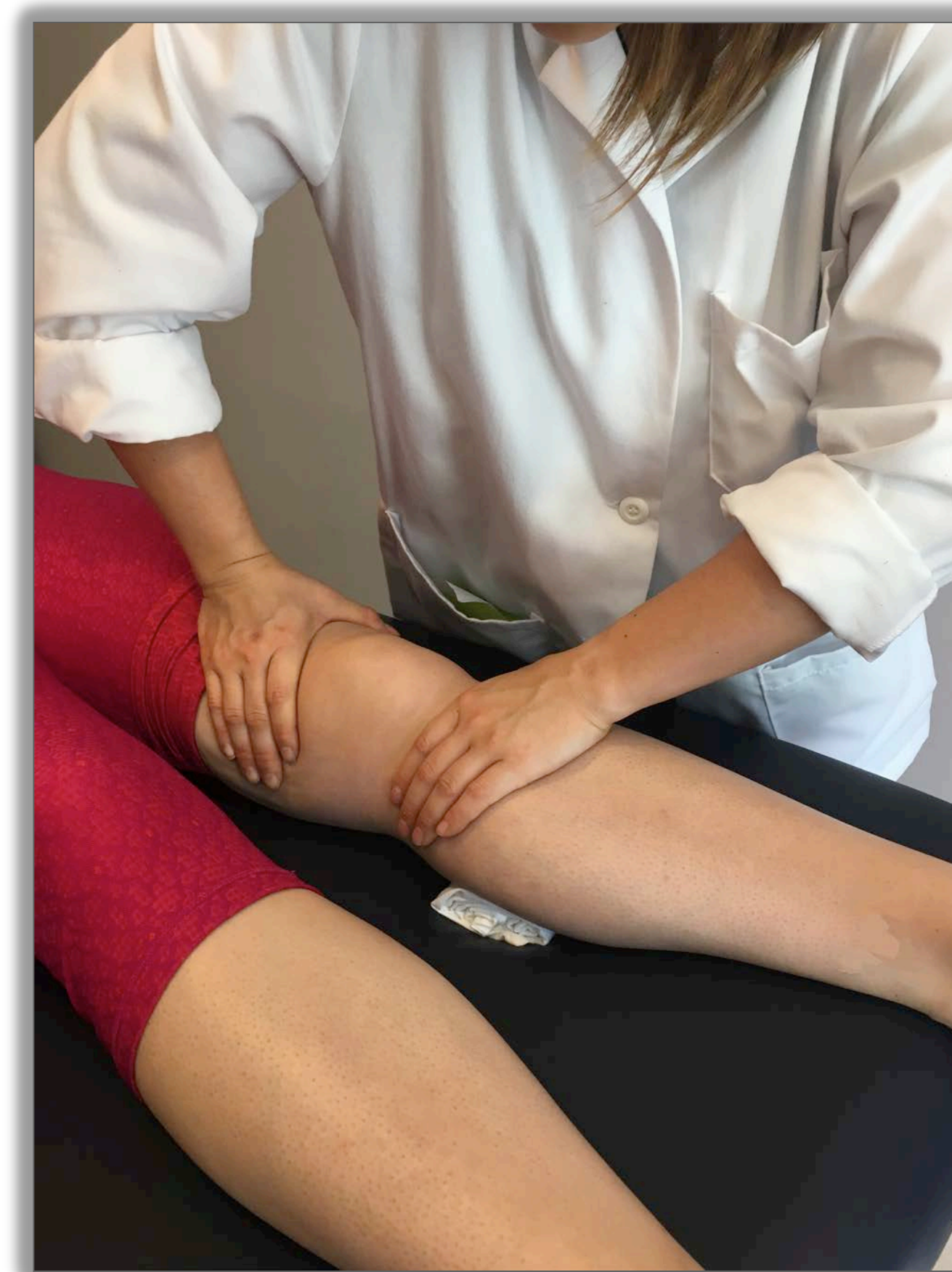


Figure 1

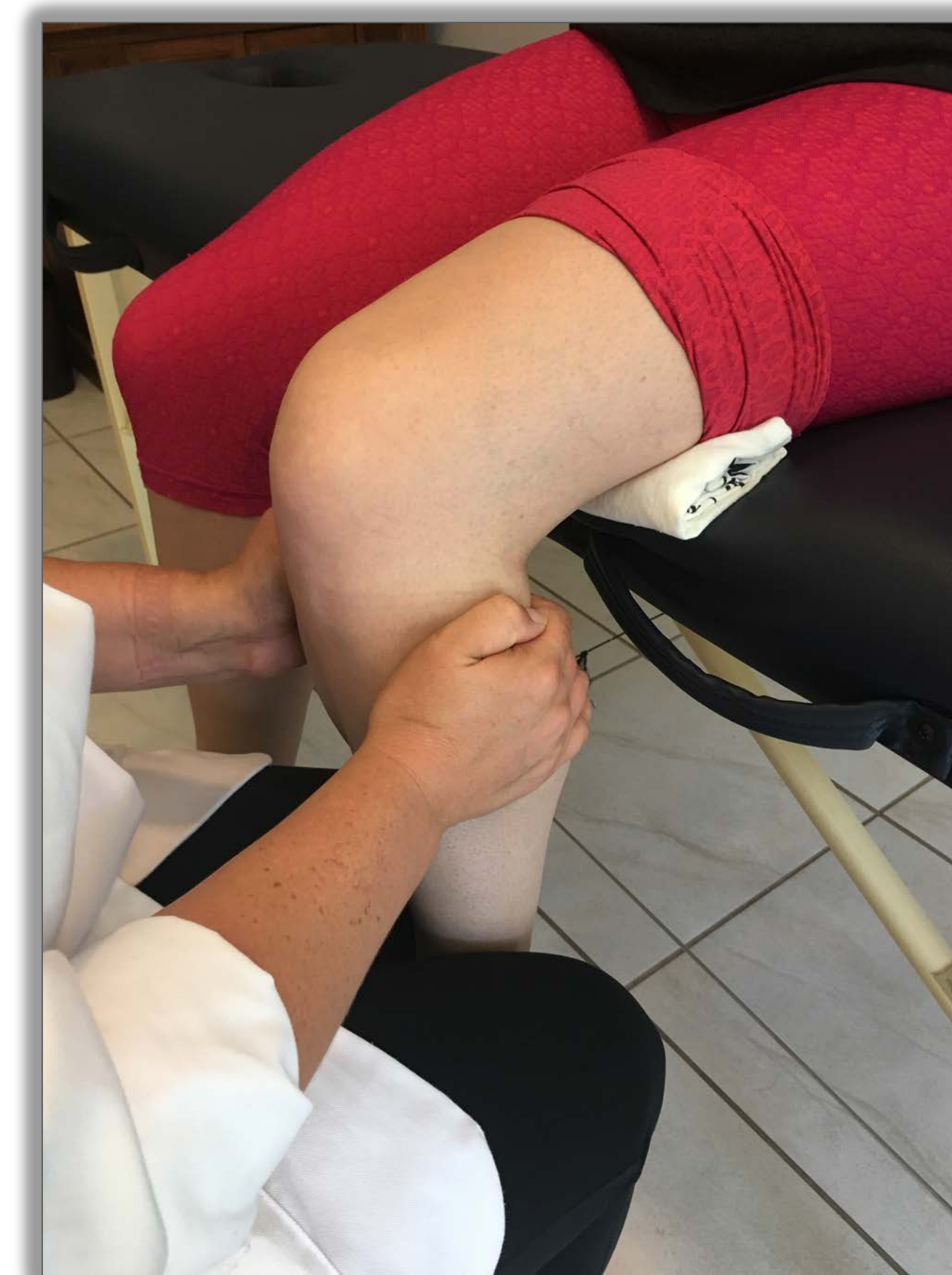


Figure 2

## RESULTS:

Table 2 – Outcome Measure Data

Outcome Measure	Initial Evaluation (Session 1)		Re-Evaluation (Session 12)		Discharge (Session 20)		
Berg Balance Score	12/36		31/56		39/56		
Numeric Pain Rating Scale	Rest	6/10	2/10	2/10	0/10	0/10	
	Best	5/10	2/10	2/10	0/10	0/10	
	Worse	10/10	5/10	5/10	2/10	2/10	
Tinetti Mobility Test	Balance	4/16	Total: 11/28	11/16	Total: 20/28	13/16	Total: 22/28
	Gait	7/12		9/12		9/12	

## CONCLUSION:

- ◆ Physical therapy intervention contributed to the patient's decreased pain levels and facilitated improvements in strength and functional performance at a statistically significant level.<sup>7, 8</sup>
- ◆ The patient identified his decrease in symptomatic complaints to be most directly influenced by joint mobilizations at the knee, consistent with prior literature.<sup>6, 9, 10</sup>
- ◆ Further investigation needed to isolate joint mobilization effects on gait within the neurological population and examine correlational relationships between knee OA and lower extremity paralysis.



## REFERENCES:

