

Physical Therapy Strategies for PTSD Management Following Gunshot Wounds: A Case Report

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INTRODUCTION

- ❖ Tibial plateau fractures represent 1% of all fractures in the adult population
- ❖ Range of motion, immobilization, and weight bearing activities are warranted for patients with tibial plateau fractures.
- ❖ Patients may also be psychologically impacted, hindering rehabilitation.
- ❖ PTSD is a common psychological response to a traumatic event, with an estimated 8% of the population developing PTSD as a result.
- ❖ CBT and pharmacotherapy are the most common interventions used to treat PTSD

CASE DESCRIPTION

- ❖ A 57-year-old male referred to outpatient physical therapy for knee stiffness after suffering from 10 gunshot wounds while mowing his lawn.
- ❖ Injury resulted in a bicondylar fracture of the left tibia, surgery and subsequent non-weight-bearing for 12 weeks.
- ❖ Left knee pain rated 4/10 at rest and 8/10 with activity, and difficulty ambulating with the cane.
- ❖ Also, with symptoms consistent with PTSD as measured by the Impact of Events Scale - Revised (IES-R), which was chosen for its high levels of internal consistency and test-retest reliability.
- ❖ PMHx: arthritis, a BMI over 30, and high blood pressure

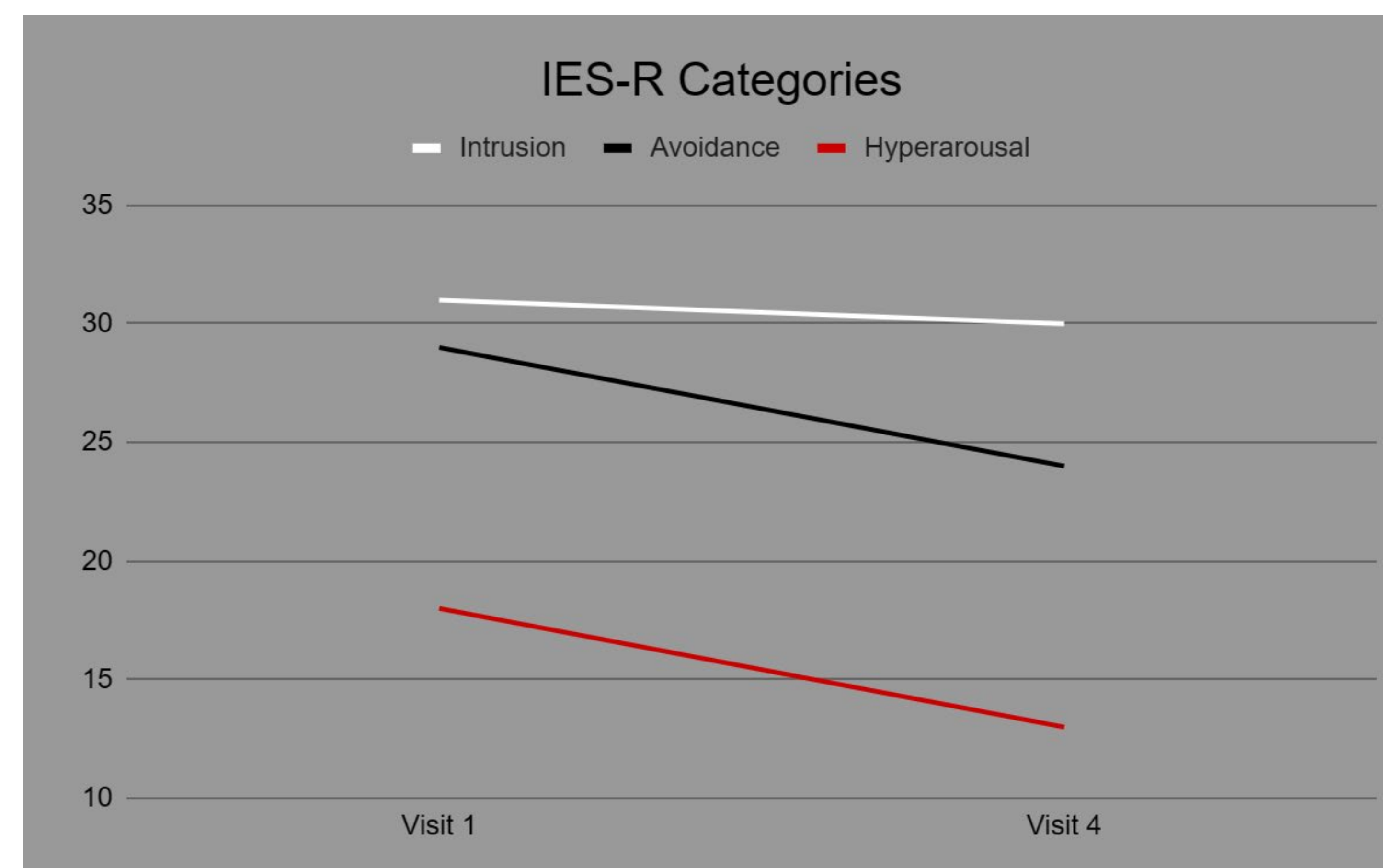


OUTCOMES

Outcome Measures	Results	Relevance
Five Time Sit to Stand (5TSTS)	18 seconds without upper extremity assistance	>10 seconds indicates an increased risk of falls in the patient's age range (50-59 years old)
Timed Up and Go (TUG)	18 seconds with single point cane, 19 seconds with no assistive device	>14 seconds indicates an increased risk of falls
Grip Strength (as measured with hand grip dynamometer)	Left Hand: 91 pounds Right Hand: 79.8 pounds	Grip strength <26 kg (57.3 pounds) associated with increased risk of mortality.
Impact of Events Scale (IES-R)	84/88	A score of 37 or more is high enough to suppress the immune system's function.

❖ Table 1 presented below showcases the selected metrics used to evaluate the patient's initial susceptibility to falls, their level of mobility, as well as the severity of their PTSD symptoms, all of which were determined based on their current medical condition.

❖ Figure 1: Overview of the patient's progress in terms of their IES-R scores. The figure presents the initial score recorded during the first visit, as well as the score measured at the last visit. The figure includes a breakdown of the scores for each of the three IES-R categories, providing valuable insight into the specific areas where the patient experienced the most significant improvements.



INTERVENTIONS

Week 1	Week 2	Week 3
<ul style="list-style-type: none">Long Arc Quad, Ball Adduction Squeezes, Clam Shells, Seated Rocker Board, Seated Calf Stretch, Sit to Stands, Recumbent Bike	<ul style="list-style-type: none">Long Arc Quad, Ball Adduction Squeezes, Clam Shells, Standing Rocker Board, Standing TKEs Seated Calf Stretch, Seated Hurdle Marching, Sit to Stands, Diaphragmatic breathing, Recumbent bike	<ul style="list-style-type: none">Diaphragmatic Breathing, Sit to stands, Standing Rocker Board, Forward and Lateral Walking Hurdles, Seated Deadlift into Overhead Press, 8" step ups, Treadmill walking

DISCUSSION

- ❖ Five sessions of functional strength, aerobic exercise, and PTSD-focused interventions positively impacted the patient's symptoms as measured by the IES-R.
- ❖ The patient's physical impairment served as a constant reminder of the traumatic event, and through physical therapy interventions, he was able to restore some prior function, leading to an improved IES-R score
- ❖ The patient's improved mobility was associated with a reduced risk of falling, and both of these scores were clinically significant.

CONCLUSION

- ❖ The findings suggest that physical therapy may be a viable treatment option for individuals with PTSD symptoms.
- ❖ Physical therapy interventions can have a mild to moderate effect on improving PTSD symptoms in some individuals.
- ❖ Further research is needed to establish the effectiveness of outpatient physical therapy for PTSD following tibial plateau fractures.

REFERENCES

