
San Marcos, Summer 2019

Research Day, San Marcos Campus

8-16-2019

Rehabilitation Modifications for a Patient with Parkinson's Disease Following a Suspected Case of Gilbert's Syndrome: A Case Study

Jason Bandong

University of St. Augustine for Health Sciences, j.bandong@usa.edu

Hy Ia

University of St. Augustine for Health Sciences, h.ia@usa.edu

Naureen Imam

University of St. Augustine for Health Sciences, n.imam@usa.edu

Kayla Wilcox

University of St. Augustine for Health Sciences, k.wilcox1@usa.edu

Travis Dennis

University of St. Augustine for Health Sciences, tdennis@usa.edu

Follow this and additional works at: <https://soar.usa.edu/casmsummer2019>



Part of the [Kinesiotherapy Commons](#), [Physical Therapy Commons](#), and the [Physiotherapy Commons](#)

Recommended Citation

Bandong, Jason; Ia, Hy; Imam, Naureen; Wilcox, Kayla; and Dennis, Travis, "Rehabilitation Modifications for a Patient with Parkinson's Disease Following a Suspected Case of Gilbert's Syndrome: A Case Study" (2019). *San Marcos, Summer 2019*. 2.
<https://soar.usa.edu/casmsummer2019/2>

This Book is brought to you for free and open access by the Research Day, San Marcos Campus at SOAR @ USA. It has been accepted for inclusion in San Marcos, Summer 2019 by an authorized administrator of SOAR @ USA. For more information, please contact soar@usa.edu, erobinson@usa.edu.



INTRODUCTION

- Studies have shown that high intensity exercise may be beneficial in slowing down the progression of Parkinson's Disease (PD).
- There is limited information on how to regress these exercises in a high functioning patient that has another comorbidity limiting his activity level.
- Based on current research, trunk stability exercises has been shown to increase step-to-step symmetry in patients with PD.
- LSVT BIG interventions and dual-tasking have been shown to increase gait speed, endurance and improvements in UPDRS and TUG scores.
- Improvements in hand grip, pinch strength, and manual dexterity have been correlated with single-hand putty exercises.

PURPOSE

- To determine the effects of core stabilization exercises, balance training, agility ladder step drills, fine motor, and dual task training in the treatment of a high-functioning patient with Parkinson's Disease and suspected Gilbert's Syndrome

CASE DESCRIPTION

Patient Profile

- 66 y/o male retired librarian with 7-year history of PD
- Taking Sinemet (2 tablets, 4 times a day)
- Suspected dx of Gilbert's Syndrome

Body Structure/Function Impairments

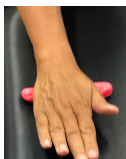
- B upper extremity tremors and dyskinesia. L>R
- Gait instability and balance difficulties on uneven surfaces
- Mild Impairments in B appendicular coordination
- Mild rigidity in B UE/LE. L>R
- Mild thoracic kyphosis and rounded shoulders which are more prominent when sitting

Activity Limitations

- Performing fine motor upper extremity tasks such as typing and buttoning shirt
- Walking long distances >1 mile without difficulty

Participation Restrictions

- Hiking
- Rock Steady Boxing



Rehabilitation Modifications for a Patient with Parkinson's Disease Following a Suspected Case of Gilbert's Syndrome: A Case Report

Jason Bandong, SPT, Hy Ia, SPT, Naureen Imam, SPT, Kayla Wilcox, SPT, Travis Dennis PT, DPT
University of St. Augustine for Health Sciences, San Marcos, CA

EXAMINATION FINDINGS

Patient Reported Functional Limitations	Initial Evaluation
Hiking	Unable to hike > 1 miles without fatigue
Upper Extremity (UE) Dressing & Grooming	Moderate limitation, requires assistance or greater time
Outcome Measures	Initial Evaluation
Timed Up and Go (TUG)	8.76 seconds
Timed Up and Go Cognitive (TUG-cog)	8.98 seconds
6MWT	406 m
Functional Gait Assessment (FGA)	24/30
Unified Parkinson Disease Rating Scale (UPDRS)	36/147

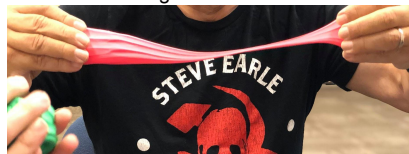
PLAN OF CARE

Frequency and Duration

- 1x/week for 4 weeks, 1 hour sessions

Interventions

- Balance Training**
 - Single limb balance and tandem stance with multi-directional ball tosses to encourage dynamic balance
- Core Strengthening**
 - Staggered stance push-pull core isometric exercise with one dowel and progression with two dowels
 - Placing the patient in a staggered stance places the patient in the functional position of terminal stance phase of gait. Activation of the core in this position helps maintain level pelvic obliquity in all planes.
 - Seated marching on swiss ball
- Agility Training**
 - Large amplitude agility ladder drills emphasizing alternating UE movements
- Dual Task and Fine Motor Activities**
 - Single hand putty exercises for manual dexterity
 - Marble Sorting with color cognitive challenge
 - Dual task mobility and coordination via buttoning of a donned flannel shirt while ambulating 10 m



OUTCOMES

- Mild improvements in activity limitations with most notable being being able to button a shirt with decreased time and assistance required
- Mild improvement body structure/function impairments with decreased LOB as evident during tandem walking in the FGA

Patient Reported Functional Limitations	Initial	Post Treatment
Hiking	Unable to perform	Requires greater time/ assistance with fatigue
UE Dressing & Grooming	Moderate limitation, requires assistance or greater time	Less time/assistance required
Outcome Measure	Initial	Post Treatment
Timed Up and Go (TUG)	8.76 seconds	7.99 seconds
Timed Up and Go Cognitive (TUG-cog)	8.98 seconds	9.03 seconds
6MWT	406 m	475 m
Functional Gait Assessment (FGA)	24/30	28/30
Unified Parkinson Disease Rating Scale (UPDRS)	36/147	25/147
Marble Sorting Accuracy	Session 3 (7/29/19)	Session 4 (8/5/19)
R Hand	91%	66.9%
L Hand	89%	100%
Dual Task Mobility & Coordination	Session 3 (7/29/19)	Session 4 (8/5/19)
	14.28 seconds	10.93 seconds
	3 buttons	3 buttons

CONCLUSION

- This case report suggests that a multimodal physical therapy treatment approach can be effective in the treatment of a patient with Parkinson's Disease and suspected Gilbert's Syndrome.
- Further studies should investigate the appropriate parameters of treatment for the management of PD in conjunction with other comorbidities that may be limiting patient activity level.

CLINICAL RELEVANCE

- Initial conservative treatment may be suitable for a high-functioning patient with Parkinson's Disease and suspected Gilbert's Syndrome to prevent regression of function and allow the patient to continue to work toward functional goals.
- An evidence-based, individualized physical therapy plan of care may help to slow down the degenerative process of Parkinson's Disease.