

Improving Quality of Life; Successful Physical Therapy Treatment for BPPV and Lower Extremity Weakness: A Case Report



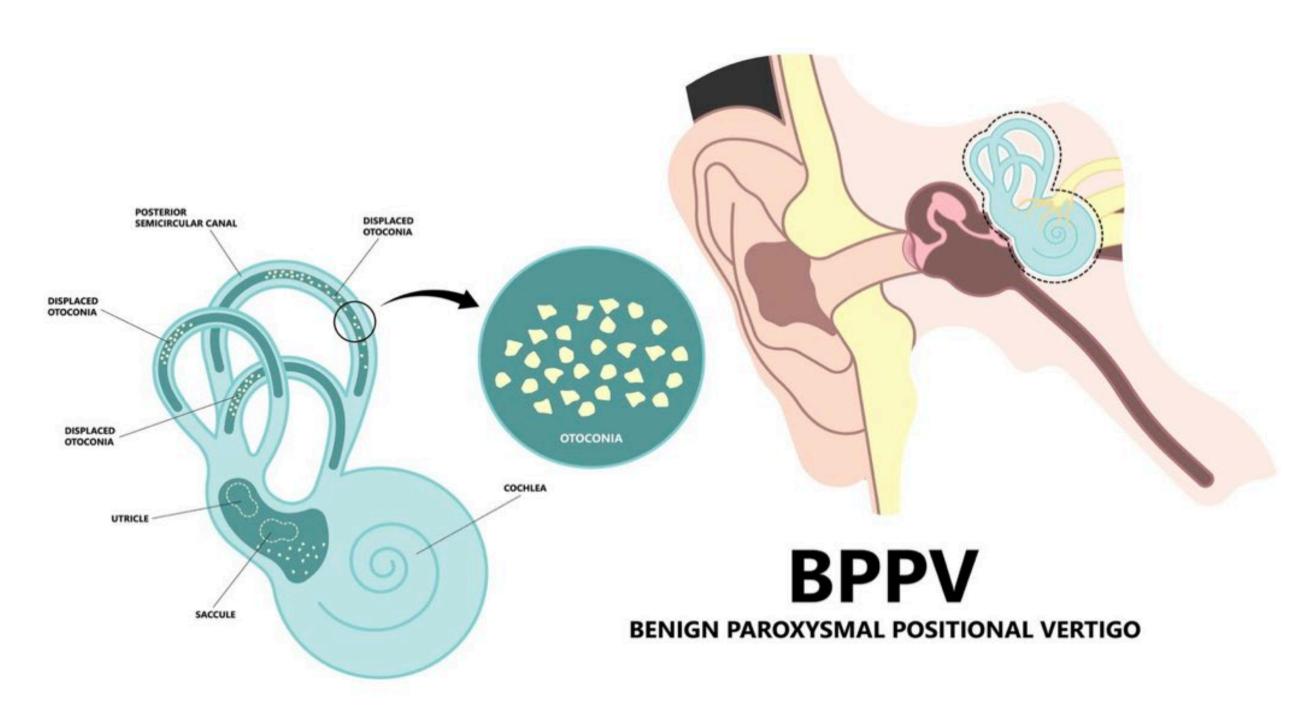
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INTRODUCTION

- ❖BPPV and/or dizziness is a common diagnosis seen in physical therapy clinics
- Dizziness can have many causes making it imperative for a therapist to thoroughly screen a patient to determine the cause of this presentation
- The presentation of BPPV includes; positional vertigo, and uneasiness of movement with certain head postures
- ❖BPPV is commonly a disorder that is resolved within 1-2 treatments of physical therapy, but in the presence of comorbidities it may take longer
- It is important to gradually progress exercise in a patient with a fear of falling to help them return to a more independent way of life

CASE DESCRIPTION

- 45 y/o, Caucasian Female
- Chief complain of dizziness and fear of falling
- Recent hospitalization for upper cervical discectomy and spinal fusion
- Patient presents with lower extremity weakness and dizziness upon exertion



INTERVENTIONS

This chart shows the addition of interventions throughout the continuum of this patient's care. These interventions aimed for her to become more functional in her transfers and ambulation along with the reduction of vertigo symptoms.

OUTCOMES

During treatment, the patient demonstrated a positive outcome from her physical therapy. The Dix Hallpike maneuver was used to re-test her vertigo symptoms and demonstrated a positive outcome for two weeks after each treatment of Epley's until symptoms slowly came back. On the return of her vertigo symptoms the patient showed decreases in her balance and functional lower extremity strength.

	Visit 1-2	Visit 3-4	Visit 5-6	Visit 7-8	Visit 9-10	Emotional
						Factors
Vertigo symptoms	+Right sided Epley's	+Increased dizziness + decreased ability to balance +decreased ability to walk	+improved vertigo symptoms +Able to participate in activities	+No changes in vertigo symptoms	+increased vertigo symptoms +Patient unable to perform exercises	+ feeling of inability to perform activities of daily living due to fear of falling and sickness
Cardio for walking	-Unable to go shopping to buy groceries	shop due to	-Able to walk for 5 minutes before needing a break	5 minutes before needing	walk due to dizziness	- Patient does not shop due to fear of having to take breaks in public due to anxiety
5 time sit to stand	39 seconds	Not retested	Not retested	35 seconds	Not retested	+Patient feels uneasy on ability to return to standing from a squatted position
Stepping over curbs	+Unable to step over curb safely	+Unable to step over curb safely	+Unable to step over curb safely	+Able to step over 6inch curb once with upper extremity assistance	•	Patient has increased fear when navigating a curb or step

The chart above emphasizes the patient's need for physical therapy and the response to interventions

PURPOSE

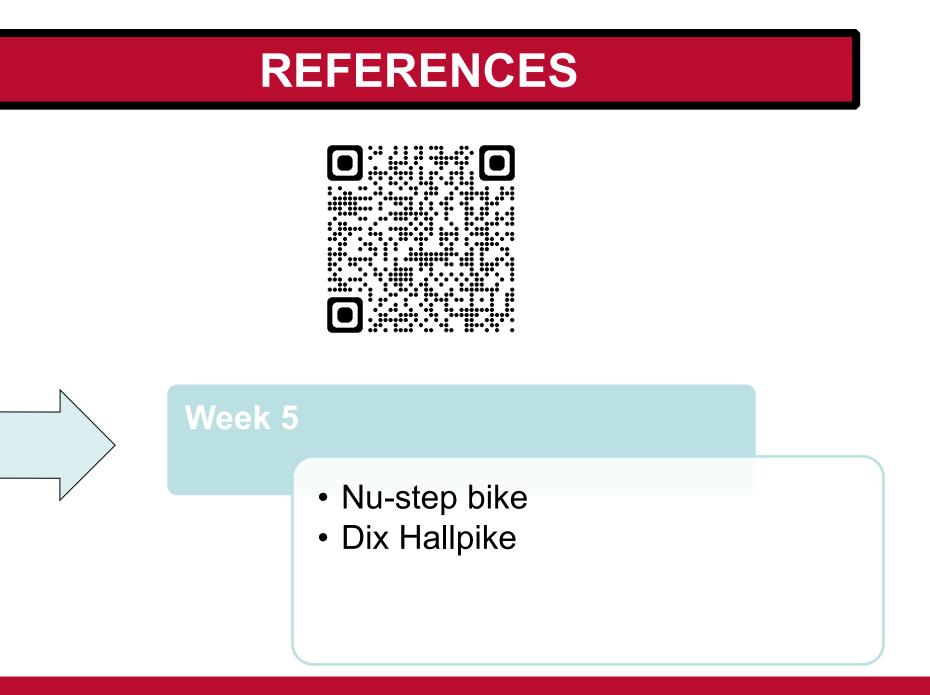
- This case report was needed as there is limited literature about the treatment of BPPV with coinciding strength deficits
- The case described the use of exercise progression that allowed a patient with BPPV and comorbidities to become more functional
- To show the process of diagnostically differentiating BPPV from other possible causes of dizziness and discoordination

DISCUSSION

- Dizziness can be caused by a multitude of factors.
- In this case the dizziness was caused by vertigo assessed with 'Dix Hallpike maneuver.
- This was confirmed due to the patient finding relief with the Epley's maneuver
- This patient, however, did not find relief long-term from the Epley's maneuver
- We speculate that due to the patient's multiple comorbidities and limitations in presentation this may be an underlying cause for the diminished benefits from the Epley's maneuver.

CONCLUSION

- Epley's maneuver may be considered in patients with increased symptoms of BPPV to clear the occlusion of calcium crystals from the inner ear, to allow them to return to their normal circulation, thereby regaining proper inner ear function
- This method, results in decreased dizziness and diminishing symptoms due to the patient's vertigo
- A person with comorbidities similar to this case will progress more slowly than traditional BPPV treatment studies may indicate



 Gait training Short Arc Quad Monster walks Supine bridges Lateral walks Clamshells Retro monster walks Seated hip IR Epley Seated Hip ER

 Treadmill walking Sit-to-stand Dynamic Balance

Week 4 Bosu lunges forward

 Bosu lunges lateral Step-ups forward, lateral, retro