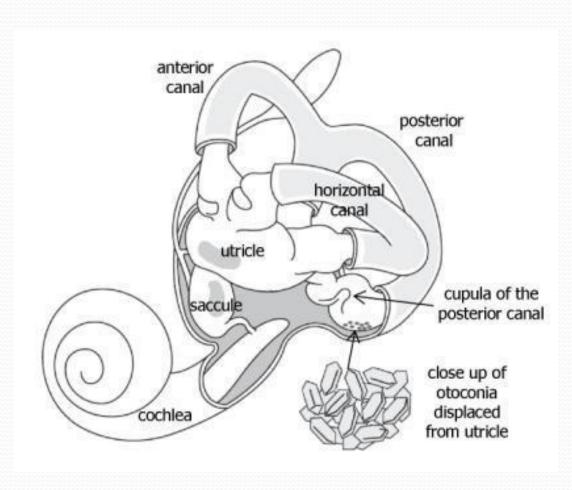
# AN ALTERNATIVE TREATMENT OPTION FOR ANTERIOR CANAL BENIGN PAROXYSMAL POSITIONAL VERTIGO

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### BACKGROUND AND PURPOSE

# BENIGN PAROXYSMAL POSITIONAL VERTIGO (BPPV)



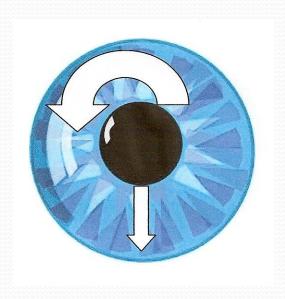
#### ANTERIOR CANAL BPPV

#### **SUBJECTIVE FINDINGS**

#### **OBJECTIVE FINDINGS**

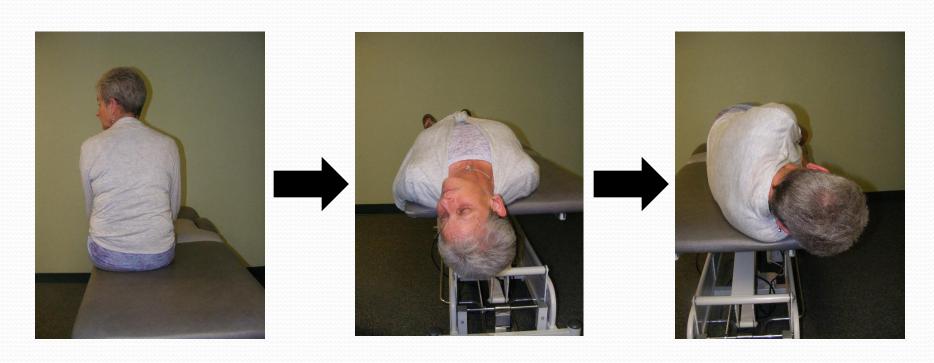
"spinning" sensation while:

- (1) lying down in bed
- (2) rolling over in bed
- (3) looking upward
- (4) bending over



### TREATMENT OPTIONS

- anterior canal BPPV techniques [1]
- posterior canal BPPV techniques [2]



The purpose of this case report was to describe the treatment of anterior canal BPPV using a "reverse" Parnes particle repositioning maneuver.

### CASE DESCRIPTION

#### SUBJECTIVE EVALUATION

- 93-year-old female
- "spinning" sensation whenever she would bend over or lie on her left side
- previous medical history of a brain aneurysm, hypertension, arthritis, osteoporosis, and recurrent back pain

#### **OBJECTIVE EVALUATION**

- ambulated without the use of an assistive device
- demonstrated a staggering gait pattern and a slow gait velocity
- reported a "spinning" sensation during the left Dix-Hallpike test (could not visualize the possible nystagmus because she closed her eyes)

### INITIAL TREATMENT APPROACH

- The patient was initially treated with the Parnes particle repositioning maneuver secondary to suspected left-sided posterior canal BPPV.
- This maneuver was unsuccessful after two attempts.
- After the second attempt, the patient demonstrated a negative Dix-Hallpike test bilaterally.
- However, she demonstrated downbeating right torsional nystagmus when she rolled over onto her left side.
- Therefore, the patient was diagnosed with suspected right-sided anterior canal BPPV.

### SUBSEQUENT TREATMENT APPROACH

- The Crevits maneuver [3] was not attempted, because it required a bedside pulley system.
- The Lorin maneuver [4] was not attempted, because it required a vertical rotatory chair.
- The Kim maneuver [5] was attempted, but it was unsuccessful.

## "REVERSE" PARNES PARTICLE REPOSITIONING MANEUVER









### OUTCOMES

### 3 DAYS POST-TREATMENT

- no vertigo during her everyday life, even when she would bend over or lie on her left side
- slight antalgic gait secondary to a recent orthopedic issue
- negative Dix-Hallpike test bilaterally

### 3 MONTHS POST-TREATMENT

- never returned to physical therapy
- contacted over the telephone
- continued to experience no vertigo or functional problems during her everyday life

### DISCUSSION

### "REVERSE" PARNES PARTICLE REPOSITIONING MANEUVER

- a viable alternative in the management of anterior canal BPPV
- useful as the first treatment option or when other appropriate techniques have been unsuccessful
- a safe and effective treatment technique despite a patient's advanced age and/or preexisting health concerns

### REFERENCES

- [1] Kinne, B. L., Crouch, N. A., & Strace, C. L. (2014). Anterior canal benign paroxysmal positional vertigo treatment techniques. Physical Therapy Reviews, 19, 79-84.
- [2] Parnes, L. S., & Price-Jones, R. G. (1993). Particle repositioning maneuver for benign paroxysmal positional vertigo. Annals of Otology, Rhinology and Laryngology, 102, 325-331.
- [3] Crevits, L. (2004). Treatment of anterior canal benign paroxysmal positional vertigo by a prolonged forced position procedure. Journal of Neurology, Neurosurgery and Psychiatry, 75, 779-781.
- [4] Lorin, P. (2007). Treatment of anterior semi-circular canalithiasis by a sedimentation procedure in a vertical rotatory chair. Annales d'Otolaryngologie et Chirurgie Cervico-Faciale, 124, 184-188.
- [5] Kim, Y. K., Shin, J. E., & Chung, J. W. (2005). The effect of canalith repositioning for anterior semicircular canal canalithiasis. ORL: Journal for Oto-Rhino-Laryngology and its Related Specialties, 67, 56-60.

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