

MEDICAL MOMENTS

Physical Therapy... Beyond Vestibular Rehabilitation in Canalith Repositioning for BPPV

Cervical Range of Motion Impacts the Outcomes of Canalith Repositioning

Posterior Canal Benign Paroxysmal Positional Vertigo (BPPV) can be treated very effectively with a canalith repositioning procedure (CRP; commonly, "Epley Maneuver"). However, to properly execute the Epley maneuver, the physician or physical therapist must be able to properly flex, extend, and rotate the patient's neck. Specifically, the patient must have good cervical range of motion (C-ROM). While clinically acknowledged, this important note had not been evaluated empirically until recently.

Martellucci et al. (2018), considered whether C-ROM might play into treatment failure yielding subsequent repeat physician visits, and recurrence of symptoms. Patients who participated in the study underwent neurotologic evaluation, including ocular alignment, gaze-evoked nystagmus, saccades and smooth pursuit. Nystagmus was assessed with infrared video-Frenzel goggles to confirm posterior canal BPPV.

For those patients with posterior canal BPPV, they immediately underwent a CRP. Patients were followed for 30 days after successful repositioning, with follow-up visits at 7 and 30 days. All patients also underwent assessments of C-ROM (i.e., flexion and extension measurement, lateral rotation, and lateral flexion). Patients were divided into groups based on the number of CRPs required to successfully treat their posterior canal BPPV (i.e., single CRP or multiple CRPs).

Residual Dizziness occurred in 27.65% of all patients, with no differences in the two groups. However, early recurrence occurred only in the multiple CRP group (27.7%). Additionally, there was a significant difference in measurements of C-ROM; reduced neck extension was significantly associated with patients requiring multiple CRPs. Reduced C-ROM is a barrier to successful CRP implementation, which can increase patient frustration and physician time on the case.

"...Performing CRPs in patients presenting neck stiffness is a common challenging experience for specialists who practices neurotology." P.4

Physical therapists trained in vestibular rehabilitation have the time to perform multiple Epley maneuvers, reducing the patient burden for otolaryngologists in the office. If necessary, physical therapists, can also address the underlying musculoskeletal deficits leading to decreased C-ROM.

Martellucci, S., et al. (2019). Does cervical range of motion affect the outcomes of canalith repositioning procedures for posterior canal benign positional paroxysmal vertigo? *American Journal of Otolaryngology*, *40*, 494-498.



Submitted by Dr. Lauren Collier Peterson, PT, DPT Clinical Director FYZICAL Therapy & Balance Centers of Oklahoma City

Dr. Peterson and her staff provide Physical Therapy for patients with pelvic floor dysfunction, imbalance and falls risk, & orthopedic injuries in OKC.

She and her staff have treated hundreds of men and women with vestibular and balance deficits. They use infrared goggles to identify the location of the BPPV and follow-up with appropriate sensory organizational testing to identify underlying balance insufficiencies. She wants everyone to enjoy good health and to work with her to "Fight the Falls!"

Call Sean Peterson (GM) at 405-400-8909 to learn more or to schedule time with a FYZICAL Therapist