Benign positional paroxysmal vertigo (BPPV) is a common, typically self-limited but recurrent disorder characterized by episodes of vertigo precipitated by certain head movements. Typically, the patient reports sudden vertigo associated with movements such as rolling over in bed, looking up suddenly, or straightening after bending over. BPPV can be clinically diagnosed on the basis of the Hallpike-Dix maneuver, in which the patient is rapidly moved from a sitting to a supine position with the head turned so that the affected ear is 30 to 45 degrees below the horizontal plane. The Hallpike-Dix test is considered positive if vertigo and nystagmus are noted. The etiology of BPPV is thought to be related to the presence of dense canaliths that collect in the dependent portion of a semicircular canal. A change in head position relative to gravity causes the canaliths to move through the canal, causing movement of the endolymph within the canal.

Canalith repositioning maneuvers have been investigated as a technique to move the canaliths back into the utricle of the semicircular canal where they will remain stationary. The most common maneuver is called the Epley maneuver. The Sermont maneuver, also called the liberatory maneuver, has also been investigated. The Epley maneuver starts with the Hallpike-Dix maneuver and then the head is turned to the opposite side before sitting up, with 6 to 13 seconds between position changes. The treatment may be repeated during the same treatment session until no nystagmus is observed. The Sermont maneuver uses a different sequence of head positioning, with 2 to 3 minutes between changes in position. Canalith repositioning maneuvers may be repeated over a series of treatment sessions if symptoms do not resolve or recur. These maneuvers are described as rapid office-based procedures.

**NOTE:** Canalith repositioning maneuvers must be distinguished from vestibular rehabilitation exercises. Vestibular rehabilitation describes a series of exercises designed to correct maladaptive postural control strategies or to overcome poor central nervous system compensation after an acute injury to the vestibular system. In contrast, canalith repositioning procedures are designed to address the underlying cause of BPPV.

**RATIONALE:**

A large number of case series have investigated the treatment efficacy of canalith repositioning maneuvers, with the majority focusing on the
Epley maneuver or a modification version of it. These studies have reported a broad range of efficacy, from 95% reported by Epley himself to no treatment effect. However, the majority of studies report success rates of greater than 80%. The variation in results may be related to modifications in the treatment methods, documentation of treatment success, and the natural history of disease. Given the self-limited nature of BPPV in many patients, placebo controlled randomized trials are necessary to confirm that any proposed treatment effect is not due to spontaneous improvement. In addition, in many instances patient selection is based on a positive finding in the Hallpike-Dix maneuver. Since this test incorporates elements of the Epley maneuver, results may be solely related to the initial diagnostic procedure. Finally, outcomes ideally should be based on a follow-up Hallpike-Dix maneuver which demonstrates resolution of nystagmus. Reliance on subjective symptoms alone may overestimate treatment effects since patients may become adept at avoiding those positions associated with vertigo.

Two representative randomized trials meeting the above criteria are reviewed here. Lynn and colleagues randomized 36 patients with BPPV of at least two months’ duration to receive either the Epley maneuver or a placebo maneuver. The diagnosis of BPPV was based on the Hallpike-Dix maneuver. Follow-up Hallpike-Dix tests were performed by an audiologist blinded to the initial therapy one month after treatment. Patients in the treatment group reported a significantly increased incidence of negative findings on the Hallpike-Dix test (i.e., resolution of nystagmus) compared to the control group (89% vs. 26.7%). Wolf and colleagues randomized 22 patients (with BPPV confirmed by a Hallpike-Dix test) to receive a modified Epley maneuver or to an untreated control group. Patients in the treatment group received the Epley maneuver on a weekly basis until symptoms resolved, as evidenced by a negative Hallpike-Dix test. Among the treated patients, complete recovery was seen immediately in 5 patients, within 3 days in 11 patients, and within 7 days in 23 patients, with a 74% overall success rate. In contrast, only 50% of the patients recovered in the untreated control group.

The above studies appear to confirm the treatment effectiveness suggested by uncontrolled case series. However, one randomized trial that reported negative results of the Epley maneuver has remained controversial. Blakely performed a study in which 38 patients were randomized to receive either a canalith repositioning procedure based on the Epley maneuver or an untreated control group. Patients were selected based on the Hallpike-Dix test and outcomes were based on patients’ subjective assessment. Patients were evaluated after one month. All patients reported substantial improvement. The author attributes the relative lack of success of the Epley maneuver to the spontaneous resolution of symptoms in both groups. However, in subsequent letters to the editor this study was severely criticized based on methodological flaws. These flaws include the lack of adherence to the Epley maneuver as described in the literature, and the fact that during the treatment session the maneuver was not repeated until nystagmus disappeared. Finally, treatment effectiveness was not validated by the Hallpike-Dix maneuver.

PRICING:
Canalith repositioning is a rapid office-based maneuver that is considered as part of the evaluation and management of the patient.

DISCLAIMER:

State and federal law, as well as contract language, including definitions and specific inclusions/exclusions, takes precedence over Medical Policy and must be considered first in determining coverage. The member’s contract benefits in effect on the date that services are rendered must be used. Any benefits are subject to the payment of premiums for the date on which services are rendered. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically. HMO Blue Texas physicians who are contracted/affiliated with a capitated IPA/medical group must contact the IPA/medical group for information regarding HMO claims/reimbursement information and other general polices and procedures.

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