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EAR, NOSE AND THROAT HEAD AND NECK SURGERY

LATERAL CANAL BPPV

There are several variants of BPPV (Benign Paroxysmal Positional Vertigo) which may occur spontaneously as well as after the Brandt-Daroff maneuvers or Epley/Semont maneuvers. They are thought to be caused by migration of otoconial debris into canals other than the posterior canal, such as the anterior or lateral canals. It is also theoretically possible for many aberrant patterns of BPPV to occur from an interaction of debris in several canals, location of debris within the canal, and central adaptation patterns to lesions. For this reason, in clinical practice, atypical BPPV is first treated with maneuvers as is typical BPPV, and the logic outlined below is entered into only after treatment failure.

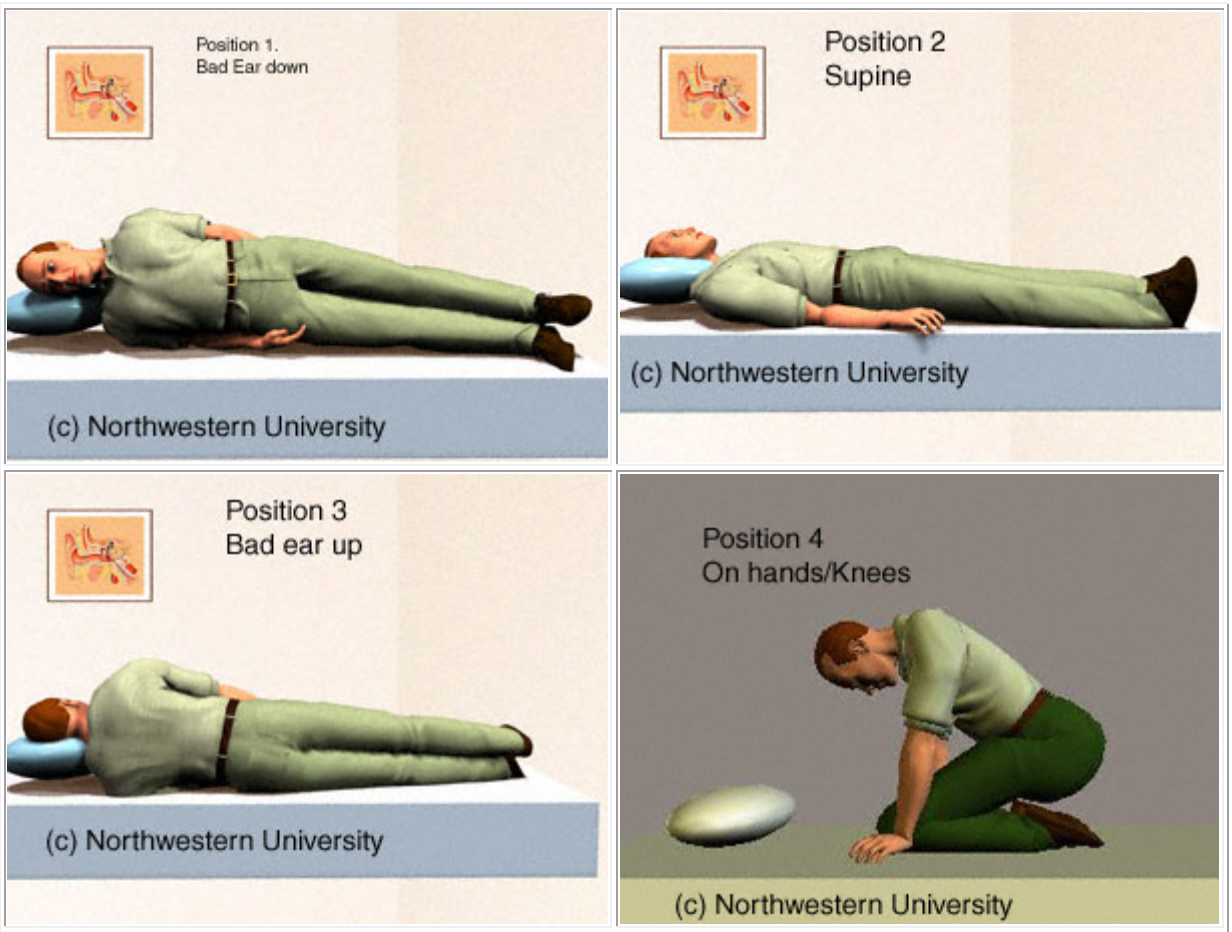
Lateral canal BPPV is the most common atypical variant, accounting for about 3-12 percent of cases (Cakir et al, 2006; Korres et al, 2002; Hornibrook, 2004). In the author's experience, most cases are seen as a consequence of an Epley maneuver, but others find that spontaneous occurence is more common (Hornibrook, 2004). It is diagnosed by seeing a horizontal nystagmus that changes direction depending on the down ear. The best position to see this nystagmus is not the Dix-Hallpike maneuver. Rather one starts with the body supine, head inclined forward 30 degrees, and then turns the head to either side.

Lateral canal BPPV can cause a very strong and prolonged vertigo. People with lateral canal BPPV are also generally more disturbed by ordinary sideways rotational head-movements than people with posterior canal BPPV. Lateral canal BPPV may occur commonly but may also be self treated as people roll back and forth at night naturally during sleep (Korres et al, 2002).

Han et al (2006) recently suggested that the nystagmus seen on lying supine is can be used to determine which ear is affected. The methodology here is that the patient is initially sitting with head bent down for 3 minutes, and then rapidly brought into the supine position, with the head on a pillow. For geotropic nystagmus, nystagmus is away from the affected ear, and for ageotropic, towards the affected ear. In other words, for geotrophic nystagmus, the nystagmus follows the general rules for paretic ears, and vice-versi for ageotrophic nystagmus.

Treatment of lateral canal BPPV

Treatment of lateral canal BPPV has not been as well established as in typical BPPV. In the author's experience, lateral canal BPPV after an Epley maneuver nearly always resolves without any treatment after a week. Accordingly, the lack of a control population in most of the studies discussed below is a serious flaw.



Log roll exercises for Lateral Canal BPPV.

The "log roll" exercises, are a procedure where an individual is rolled in steps of 90 deg, starting supine/affected ear down, to supine, to affected ear up, to nose-down, and then to sitting at intervals of 30 seconds or one minute. This procedure seems very reasonable and it is the one that we use in our own practice. There is a report of 75% efficacy (15/20) of a variant procedure (e.g. Fife, 1998) called the "iterative full-contralateral roll", going from supine nose up, a full 360 degrees in 90 degree increments, rotating towards the good ear. This procedure is performed once or twice in the clinic and repeated at home for 7 days. It seems to us that the difficulty of establishing which is the "bad" ear is an obvious drawback of this procedure and in some situations, we do the log roll to one side for a week, and follow with the log roll to the other side for another week. We also feel that it is preferable to begin with the bad-ear down rather than supine, for situations where there is debris close to the ampula. Vibration of the mastoid might theoretically add to efficacy of this procedure but no studies are available at the present writing.