

Benign paroxysmal positional vertigo

A safe and effective treatment is available for this well defined condition

Benign paroxysmal positional vertigo is one of the few disorders of balance for which there is a simple, safe, and highly effective treatment. Although vertigo is rarely a presenting complaint of serious underlying pathology, it is a symptom that is both distressing and highly disruptive.

Benign paroxysmal positional vertigo is characterised by shortlived episodes of vertigo in association with rapid changes in head position. The pathology usually lies in the posterior semicircular canal of the inner ear. It is now widely accepted that "canalolithiasis" causes this condition. Free floating debris in the endolymph of the semicircular canal is assumed to act like a plunger, causing continuing stimulation of the auditory canal for several seconds after movement of the head has ceased. The condition is idiopathic in most patients. The commonest identifiable cause, in some 20% of patients, is minor trauma to the head. The condition can present at any age but reaches a peak in the sixth and seventh decades.

Patients with benign paroxysmal positional vertigo due to involvement of the posterior canal typically have episodic vertigo in association with a rapid change in head position, particularly any movement relative to gravity. The vertigo lasts from a few seconds to one minute. Typical manoeuvres provoking vertigo include sitting up or lying down in bed and turning to reach for objects on high shelves. Attacks tend to occur in clusters, and symptoms may recur after an apparent period of remission.

The Hallpike manoeuvre is used to confirm the diagnosis of benign paroxysmal positional vertigo due to involvement of the posterior canal. A positive test provokes vertigo and nystagmus when a patient is rapidly moved from a sitting to lying position with the head tipped below the horizontal plane, 45 degrees to the side, and with the side of the affected ear (and semicircular canal) downwards. Accompanying nausea may be intense. The rotatory nystagmus typically has a latency of a few seconds before onset and fatigues after 30-40 seconds. Two main diagnostic pitfalls exist. Firstly, patients who develop significant symptoms with testing but do not develop nystagmus do not have benign paroxysmal positional vertigo. Secondly, patients who have vertigo due to pathology in the central nervous system may develop nystagmus with the Hallpike manoeuvre, but typically this has no latent period, does not fatigue with time or repeated testing, and is rarely accompanied by nausea.

The spontaneous remission rate for benign paroxysmal positional vertigo is high, and many patients probably do not seek medical care before their symptoms resolve. In one randomised controlled study in which most patients were recruited within two weeks of the onset of symptoms, 77% of patients in the control group were significantly better after one month.¹

Vestibular suppressant and antiemetic medication is generally ineffective in benign paroxysmal positional vertigo. In recent years treatment has been greatly

enhanced by the introduction of physical treatment which disperses the canal debris. The Epley manoeuvre entails a sequence of movements of head and trunk to rotate the posterior semicircular canal in a plane that displaces the plug of debris from the canal into the utricle of the inner ear, where it is inactive.² A recent Cochrane review confirms the efficacy of the Epley manoeuvre for treating benign paroxysmal positional vertigo.³ Pooled data from two trials comprising 86 patients yield an odds ratio of 4.92 (95% confidence interval 1.84 to 13.16) in favour of treatment with resolution of symptoms as an outcome. The odds ratio for conversion of a positive to negative Hallpike test is slightly higher at 5.67 (2.21 to 14.56).

The status of instructions given to patients after treatment is controversial. Anecdotally, many patients are advised to minimise head turning (if necessary with a soft collar) and sleep with their head raised on pillows, with the affected ear uppermost, for 48 hours. Although this advice is based on a sound theory, there is no clinical evidence to support it. Since the instructions are difficult to adhere to strictly, it may be no more than a subtle way of shifting blame for treatment failure from doctor to patient.

Benign paroxysmal positional vertigo can recur after successful treatment. All the published trials focus on short term resolution of symptoms as an outcome. There is no evidence to show that the Epley manoeuvre reduces later recurrence of benign paroxysmal positional vertigo, which is seen in the natural history of the disease. However, patients who have frequent recurrences can be taught to perform the exercises themselves at home. A tiny proportion of patients who have severe recalcitrant symptoms may be considered for surgical treatment—either surgery to obliterate the posterior semicircular canal or singular nerve section.

At times, the management of patients with vertigo can be challenging and unrewarding. It is beset by problems of imprecise diagnosis and treatment that is targeted at minimising symptoms rather than effecting an underlying cure. Benign paroxysmal positional vertigo is a notable exception to this. It is a well defined clinical syndrome with a clear diagnostic test, and a safe, simple treatment is available that takes five minutes to perform. However "benign" the condition may sound, this is not an opportunity to overlook.

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