

Epley's Maneuver Alone Vs. Epley's Maneuver with Betahistine for Mild "Paroxysmal Positional Vertigo" A Tertiary Care Hospital Study

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ABSTRACT

Objectives: This study aimed to compare the effectiveness of Epley's and Epley's maneuvers plus betahistine for treating benign paroxysmal positional vertigo in a Peshawar tertiary care hospital.

Method: The study took place from January 15th, 2018, to January 15th, 2019, at a tertiary care hospital for evaluation. There are two types of patients we are aiming for. In group A, patients with benign paroxysmal positional vertigo underwent Epley's technique alone, whereas those in group B received both the procedure and betahistine.

Results: Forty-seven participants participated in the research. There were 15 women in Group A (60%) and ten men (10%) in Group B (55%-45%). Patients had a mean age of 35 years. The combination of Epley's maneuver and betahistine was more successful than either treatment alone Group B had a 75% success rate in treating benign paroxysmal positional vertigo. In contrast, Group A had a 60% success rate.

Conclusion: "Epley's" operation solitary is effective for treating benign paroxysmal positional vertigo, but when combined with betahistine, the results are much better.

Keywords: Benign paroxysmal positional vertigo, "Epley's" manoeuvre, "Epley's" manoeuvre + "betahistine".

INTRODUCTION

The most common symptom is benign positional vertigo, a problem with the peripheral vestibular system (BPV). Movement-like sensations, known medically as vertigo, result from dysfunction in the vestibular proprioceptive system⁰¹; what we call benign [paroxysmal positional vertigo is a clinical disease characterized by a sudden and exaggerated perception of movement in a specific area of the body or the head. Calcium carbonate otoconia, semicircular canals receive fluid from the utricle and saccule, where they are stored. The patient experiences dizziness and spinning for less than a minute⁰². This kind of vertigo is often brought on by a rapid change in the head's orientation concerning the center of gravity. In 1890, Adler was the first to recognize BPPV, and later in 1995, Barany confirmed his work⁰³. Patients with this illness often experience vertigo while lying down, turning in bed, bending forward, or turning their heads back.

3 The Dix-Hall Point Maneuver is an in-office positioning assessment used to provide a clinical diagnosis of this condition. The so-called Epley maneuver⁴ is effective in the treatment of most patients⁰⁴. Approximately 89.9% of instances of BPPV originate in the posterior semicircular canal. Certain patients, especially the elderly and the anxious, may continue to experience dizziness and imbalance even after what seems to be effective repositioning efforts⁰⁵. As a result, it's possible that systemic illnesses have a role in either hastening or causing the disease. As a result of its anti-nausea and sedative properties, betahistine has been demonstrated to improve the quality of life for people living with peripheral vestibular vertigo by reducing the frequency and severity of attacks and dizziness. Unfortunately, zero medical proof is accessible to analyze its effects on [BPPV] therapy. The Epley maneuver has proven that recovery is speeding up, even though BPPV usually resolves on its own in time⁰⁶. The Epley technique works well tolerated by the patient and takes a while to complete. A medical professional at a clinic is the best person to do this. In 43 patients with BPPV, the entire cessation was achieved with an Epley maneuver alone, representing 90% improvement. Pathophysiology and BPPV therapy are simple, but by that point, it is usually too late⁸. A second analysis indicated that the treated group had a greater cure and overall success rates after one week of therapy compared to the control group [75% vs. 49.5.00% and 90.85% vs. 80% P 0,05]. 9 The goal of this research is to determine whether or not betahistine is useful in conjunction with the Epley maneuver for the treatment of benign paroxysmal

vertigo⁰⁷

METHODOLOGY

Between January 15th, 2018, and January 15th, 2019, a study design was carried out at the Otorhinolaryngology and Head & Neck Surgery Department of a tertiary care hospital in Peshawar. The sample was selected using a non-probabilistic technique, and the patients were divided into two groups. A total of 24 patients were split evenly between Group A (Epley alone) and [Group B] "Epley's" Plus "betahistine." In all, there were 23 patients. Patients aged 18 and above who presented with dizziness as their only symptom for a duration of shorter than a minute and were ultimately identified with the Dix-Hall picking maneuver included Hearing loss, tinnitus, and a full feeling in the ears have been cured, along with patients who had vertigo for more than a minute. Acute peripheral vestibulopathy and Meniere's disease patients were also excluded. After receiving permission from the Hospital Ethical and Research Committee, the research commenced. Before their respective surgeries, both patients were allowed to provide their informed permission. Patients were randomly assigned to either Group A or Group B. Epley's technique was only performed on Group A after oral betahistine had previously been administered to individuals in Group B. Group B took tablets containing 48 milligrams of betahistine twice weekly for two weeks. All patients were monitored for one week after treatment ended, and the treatment's effectiveness was determined using provocative role testing (Dix-Hall pike)SPSS 24.0 was used to analyze the data. Quantitative variables with an age-related scale are presented as means standard deviations as qualitative characteristics like gender and efficacy are recorded in frequencies and percentages.

RESULTS

In all, 47 people participated in the study. Group A (Epley's only) consisted mostly of females, whereas Group B (which included both sexes) was predominated by males (55% to 45%). (Table 1). On average, patients' ages range from 20 to 75, with a mean of 32. Group A included 35% of patients between the ages of 25 and 40, whereas Group B had 25% of patients between the ages of 45 and 65. (Table 2). For benign paroxysmal vertigo, Epley has been proven to be more effective than Epley alone ([75%] Two dosages of [48 mg betahistine] twice a day resulted in significantly better

effectiveness in Group B than in Group A (60 vs. (Table 03).

Table 1: Patient gender distribution in both cadres

| Sex | Participants of Group B (Epley's manoeuvre with oral betahistine) | | Participants in Group A (Epley's maneuver alone) | |
|--------|---|------------|--|------------|
| | Total | Percentage | Total | Percentage |
| Female | 13 | 55 | 14 | 60 |
| Male | 10 | 45 | 10 | 40 |
| Total | 23 | | 24 | 47 |

Table 2: Variation of patients by age group

| Age | Participants of Group B (Epley's manoeuvre with oral betahistine) | | Participants in Group A (Epley's maneuver alone) | |
|-------------|---|------------|--|------------|
| | Total | Percentage | Total | Percentage |
| 20-25 | 01 | 05 | 03 | 13 |
| 25-40 | 08 | 35 | 06 | 26 |
| 40-50 | 02 | 07 | 04 | 16 |
| 50-60 | 07 | 30 | 06 | 28 |
| 60-75 | 06 | 22 | 04 | 15 |
| Grand Total | 23 | | 24 | 47 |

Table 3: The efficacy of various treatments for ["benign paroxysmal positional vertigo"]

| Efficiency | Participants of Group B (Epley's manoeuvre with oral betahistine) | | Participants in Group A (Epley's maneuver alone) | |
|-------------|---|------------|--|------------|
| | Total | Percentage | Total | Percentage |
| No | 05 | 22 | 09 | 40 |
| Yes | 19 | 75 | 15 | 60 |
| Grand Total | 23 | | 24 | 47 |

DISCUSSION

While BPPV is more common in the elderly, it may affect people of any age. Several large-scale studies demonstrate this is possible by midlife⁰⁸. Most cases of vertigo in young persons are due to labyrinthitis or vestibular neuronitis. It is common for the latter to have hearing loss, but the former does. Women make up half of the total population, while males make up the other half. The yearly incidence rate of benign positional vertigo (BPV) is [64 per 100,000] people (conservative estimate)⁰⁹.

BPPV comes in two distinct flavors. The posterior semicircular canal is responsible for the first, whereas the lateral semicircular canal is responsible for the second. In 80-90% of instances, posterior BPPV is the most common kind to be diagnosed¹⁰. Clinicians from a variety of fields may diagnose and treat BPPV. When treating BPPV, doctors in various fields of medicine have widely varying approaches. There are several approaches to both diagnosis and therapy, each of which varies. A single Epley maneuver is all needed to treat BPPV adequately, and it's also recognized that post-semicircular channel realignment and rehabilitation activities are crucial¹¹.

Our investigation here wasn't meant to compare Betahistine's efficacy against the Epley Vertigo Resolution Maneuver to that of Epley's Golden Standard but rather to test whether or not the two had any synergistic effects. In 22% of individuals, vertigo might persist for up to 3 months even after repositioning, according to some research.¹³. "Epley's" maneuver and betahistine have both been studied for their potential to alleviate symptoms of benign paroxysmal positional vertigo (BPPV). Betahistine has been shown to increase labyrinth

microcirculation and decrease neuronal activity in vestibular receptor cells, afferent neurons, and vestibular nuclei. Betahistine, at a dose of 30 mg daily, was shown to be useful for improving quality of life in individuals with recurrent or chronic BPPV by Mira et al. 19. If given at levels higher than 32 milligrams per day, betahistine has been shown to alleviate the symptoms of chronic or persistent BPPV, as reported by Della Pepa et al. 20. Based on our findings, we conclude that Epley with betahistine is an effective treatment for BPPV¹⁴.more effective and efficient (75 % effectiveness in Group B Vs. 60 % in group A)¹⁵.

CONCLUSION

Finally, when dealing with benign paroxysmal situations, Epley's technique combined with "betahistine" is more effective than "Epley's" maneuver alone. We do, however, urge further large-scale randomized control studies in a variety of settings.

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