EPELY, SEMONT, BRANDT DAROFF MANEUVERS IN THE TREATMENT OF BPPV


ABSTRACT

INTRODUCTION

Benign paroxysmal positional vertigo (BPPV) is one of the most frequent vestibular disorders. It is characterized by the sudden onset of dizziness or vertigo precipitated by a specific position. Most frequently, it affects the posterior semicircular canal.

The Dix Hallpike maneuver is the gold standard test for diagnosis, eliciting a characteristic benign paroxysmal positional nystagmus with vertigo at the same time.

Its treatment is fundamentally based on particle-repositioning maneuvers (PRM), aimed at removing otoconial debris from the semicircular canal to the vestibule. There are currently no studies comparing the effectiveness of these three maneuvers so it tries to find which is the most effective in the resolution of BPPV.

Little is known, more or less objectively, on the individual perception of patients with dizziness/vertigo and emotional and functional consequences.

METHODS AND MATERIALS

23 patients were included with diagnosis benign paroxysmal positional vertigo (BPPV) treated at the Otolaryngology department of the Hospital Civil de Culiacan from January 2013 to January 2015.

This study was approved by the Ethics Committee. All patients had positive Dix-Hallpike test. Patients were randomized in 4 groups: Epley, Semont, Brandt Daroff and Sham (control) in a single blinded study. The maneuver initially assigned was carried out on their first visit and then the patient was assessed to see resolution, persistence or recurrence of vertigo in the first week, two weeks and 12 weeks.

Patients performed “Dizziness Handicap Inventory” at the first visit, at 2 weeks and 3 months.

Patients who showed no improvement by the second week, were performed the Epley maneuver. Inclusion criteria: Patients over 18 years, patients with nystagmus to the Dix Hallpike maneuver, patients with unilateral BPPV.

RESULTS

23 patients were included, 18 women and 5 men. The average age of the patients was 62.48 (+/- 12.71). Patients were randomly assigned to 4 groups: (BD) n=4, Sham n=4, (S) n=9, (E) n=6 (figure 1). In 18 (78.26%) patients the right ear was involved; in the remaining 5 cases (21.73%) the left ear was affected. The average latency of nystagmus was 6.39 seconds.

The average duration of nystagmus was 11 seconds. In 14 patients the vertigo was resolved with the original maneuver (figure 2). In 9 patients vertigo and nystagmus persisted after the initial maneuver, therefore an Epley maneuver was performed. DHT test was negative from the first week in 5/6 (83.3%) of patients with Epley maneuver 4/9 (44.4%) with the Semont maneuver. 0/4 (0%) of Brandt Daroff group and sham maneuver 0/4 (0%) (p=0.017). In the second week, all patients (n=6) assigned to the Epley maneuver had complete resolution of disease (p = 0.003), the improvement in Dizziness Handicap Inventory was also higher in patients in the Epley group by the second week (p<0.015) (figure 3). Three patients had recurrent disease (2 patients Semont group, 1 patient Brandt Daroff group).

Patients who showed no improvement by the second week, an Epley maneuver (n=9) was performed.

CONCLUSIONS

Epley maneuver is more rapid and effective for the resolution of BPPV compared with placebo. Semont and Brandt Daroff maneuvers.

This study demonstrates the Epley maneuver as the best treatment option and recommends its routine application in BPPV patients.

REFERENCES