

Video head impulse test (v-hit) in individuals with type 1 diabetes mellitus

ABSTRACT

Purpose

To verify the function of the labyrinth semicircular channels of type 1 diabetes individuals submitted to the Video Head Impulse Test (v-HIT) and to compare them with individuals without diabetes.

Methods

Cross-sectional, observational, analytical study conducted with a convenience sample of 35 diabetic and 100 non-diabetic individuals. All participants were submitted to vestibular evaluation using v-HIT.

Results

The sample consisted of 135 participants divided into two groups. The study group was composed of individuals with type 1 diabetes, totaling 21 women and 14 men. The age range was between 18 and 71 years, with a mean of 35.37 years and standard deviation of 10.98. The group without diabetes was composed of 77 women and 23 men. The age range was between 20 to 83 years, with a mean of 46.44 and standard deviation of 19.82. The groups were matched for age ($p=0.098$) and gender ($p=0.052$). Diabetic patients showed decreased gain in the posterior and left anterior semicircular canals. Velocity showed a significant difference in the left lateral, anterior right and posterior left canals in the group with DM1, however velocity did not show correlation with the gain of the semicircular canals.

Conclusion

participants with type 1 diabetes mellitus showed a decreased gain in the posterior semicircular canals and in the left anterior canal when compared to non-diabetic individuals.

Keywords:

Inner ear; Semicircular canals; Labyrinth diseases; Diabetes mellitus; Postural balance