

## **TETRA-ATAXIOMETRIC POSTUROGRAPHY IN PATIENTS WITH MIGRAINOUS VERTIGO**

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**Objective:** Clinical and epidemiologic studies support a link between migraine and vertigo but it is not well known why some migraineurs complain of vestibular symptoms and some do not. In this study we aimed to investigate balance functions in migraineurs with and without vertigo with tetra-ataxiometric posturography system which provides objective assessment of somatosensory, proprioceptive, vestibular, and visual information.

**Method:** Sixteen patients with migrainous vertigo, 16 patients with migraine without aura and no vestibular symptoms, and 16 controls were included in the study. Static posturography were performed and statistical analyses of fall, Fourier, Stability, and Weight distribution indexes were performed.

**Results:** Distribution of patients with posturographical abnormalities in migrainous vertigo group was significantly different than the control group. Distribution of the patients with posturographical abnormalities in the high frequencies of the head-right position was significantly different in migrainous vertigo group than the control group and the distribution of the patients with posturographical abnormalities in the high frequencies of the head-right position was significantly different in migraine group than the controls groups. Stability index of the migrainous vertigo group was significantly higher than the control group when tested on the neutral-head position with open eyes.

**Conclusion:** This study is the first study in which tetra-ataxiometric static posturography was used to evaluate postural abnormalities and our results showed that central part of the vestibular apparatus would be the responsible anatomical structure of postural abnormalities in patients with migraine and migrainous vertigo.