MAGNETIC RESONANCE BRAIN IMAGING IN PATIENTS WITH VISUAL VERTIGO

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Introduction: Patients with visual vertigo (VV) report dizziness provoked by moving visual surroundings. It has been suggested that these subjects develop a compensation strategy for a vestibulo-proprioceptive deficit and rely excessively on visual input. We have postulated that patients with VV might have brain abnormalities that interfere with appropriate processing of visual stimulation and performed a brain MRI study to verify this hypothesis.

Materials and methods: Patients with VV of more than three months duration were included. They were asked to complete The Situational Characteristic Questionnaire (SCQ) that scores for the symptoms of VV. Dizzy patients without VV served as controls. A brain MRI was performed with a Siemens 1.5 Tesla scanner in patients and controls.

Results: Twenty four patients with VV were included. Their mean SCQ score was 1.45±0.9 (normal 0.16 ± 0.28)**.** In 50% abnormalities on MRI imaging were found. Thirty three percent of 27 controls demonstrated an abnormal brain MRI. The two groups were similar in respect to the prevalence of a localized hemispheric or posterior fossa lesion (p=0.13) but VV patients had more unspecific white matter brain changes than controls (p=0.009). Patients and controls did not differ in age and gender distribution (p= 0.9) or the history of a neurotological event preceding their symptoms (p=0.3).

Conclusions: Our study suggests that multiple white matter lesions might contribute to occurrence of the phenomenon of VV. Future prospective large scale studies by specific MR techniques are indicated to validate our preliminary findings and elucidate the pathological mechanism of VV.