Analyzing and Evaluating Pupillary Diameter in Migraine Patients and Non-headache Patients Under the Effect of Light Stimuli

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The goal of this study is to identify whether the diameter of constricted pupils could be used in the diagnosis of migraine in adolescents. At present, there seems to be no single simple way to diagnose migraine. Due to the unavailability of specific biomarkers or conclusive diagnostic tests, migraine patients often receive a confirmed diagnosis only years after their migraine attacks began. In this research experiment, migraine's effects on the eyes were investigated. Previous studies have suggested that pupillary diameter could be implemented to diagnose migraine patients quicker and more efficiently. 60 participants took part in the current study. They were split into two groups: migraine patients and non-headache subjects. First, participants who experienced migraines were identified using a Migraine Disability Assessment Test. The pupillary diameters of all participants were measured and analyzed. Results show that pupillary diameter is significantly smaller in migraine patients than non-headache patients. These findings may have significant implications for the diagnosis of migraine using pupillary diameter measurements.

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