

## The impacts of migraine attacks on cognition in young Iranian chronic migraineurs in resting state

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**Background:** Chronic migraine disease as a repeated primary headache has multiple vasoconstrictions and vasodilatations which can be gradually damaged to the structure of the human brain. We have not known the correlation between each characteristic of migraine attacks and various cognitive domains. The present study examines the impact of migraine characteristics on cognitive domains in young chronic migraine sufferers (CMs). **Methodology:** 150 young CMs without aura and 100 healthy controls assessed using Montreal Cognitive Assessment (MoCA), the Frontal Assessment Battery (FAB), and Migraine Disability Assessment Questionnaire (MIDAS) selected. Depression and anxiety rates evaluated using Hamilton tests. Scores combined for comparison of cognitive domains and analysis of test results using independent t-student, Spearman's correlation, logistic regression, and Bonferroni correction for the sub-test of batteries. The patients had to be migraine-free during the past 3 days. **Results:** CMs had lower MoCA scores than controls (OR=1.15;95%CI 0/99\_1.33), even after adjustment for depression, gender and educational level. CMs displayed visuospatial and attention impairments (P=0.02, P=0.001). Pain severity had no effect on the MoCA scores, FAB scores and MIDAS Grading (P=0/05). CMs with a longer duration of migraines displayed a causal relationship with the FAB Scores and MOCA visuospatial sub score (P=0.05). The frequency of attacks was also associated with disability in CMs (P=0.04). **Conclusion:** Cognitive performance reduction occurred in CMs. Visuospatial and attention mostly impaired in CMs. The duration of a migraine complains associated with the degree of impairment of FAB Scores, and MOCA visuospatial subtests, suggesting a correlation between cognition and the length of the disease.