



## COGNITIVE IMPAIRMENT, ITS RISK ASSOCIATIONS AND EVENT RELATED POTENTIAL P300 IN PATIENTS WITH MIGRAINE: A PROSPECTIVE CASE CONTROL STUDY.

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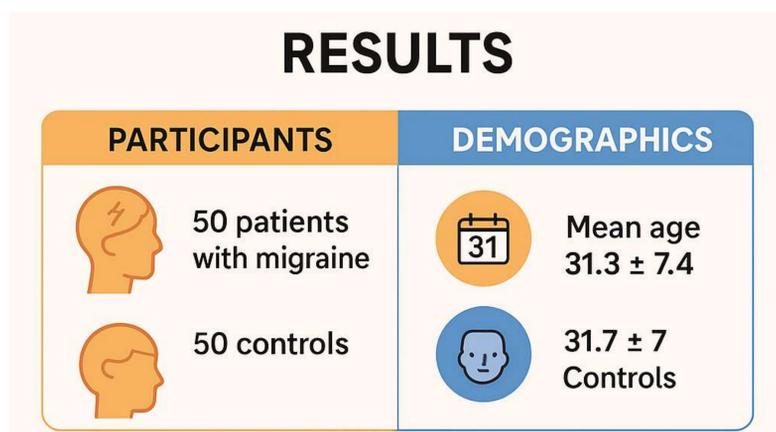
### AIM:

This study aims at understanding the frequency and magnitude of Cognitive impairment, its risk associations and event related potential P300 in patients with migraine (interictal phase) in a prospective case control design.

### MATERIALS AND METHODS :

A Prospective case control study was conducted in a tertiary hospital in India. The demography, migraine type, migraine related factors, cognitive, sleep and psychological parameters were noted in patients and controls. Neuropsychological tests including TMT A & B, phonemic fluency, TNI- 93 and Event related Potential P300 performed in patients and controls during July 2022 to November 2023.

### RESULT:



The total numbers of years of education were higher in controls compared to migraineurs. In migraineurs 40% had MCI, 4% had SCD while 56% were normal. Patients with MCI had longer duration of illness, higher levels of depression, poor sleep quality, and anxiety compared Non-MCI patients.

However, none of the parameter was significant independent risk factor for MCI. 22% of patients had impairment in attention & executive function domain. Migraineurs had lower P300 amplitude compared to controls, while no significant difference was seen in P300 latency between both groups.

Diagnostic construct in migraineurs	Frequency	Percentage
MCI*	20	40.00%
SCD*	2	4.00%
Normal	28	56.00%
Total	50	100.00%

\*MCI- Mild Cognitive Impairment \*\*SCD – Subjective Cognitive Decline

Mild cognitive impairment in Migraineurs	Frequency	Percentage
Both domain	7	14.00%
Only Executive	11	22.00%
Only Episodic memory	2	4.00%

### CONCLUSION:

In conclusion, our study highlights the significance of addressing cognitive and psychological parameters in migraine care, emphasizing the need for personalized therapeutic approaches. Future treatments may benefit from targeted cognitive interventions and a holistic understanding to enhance the management of this neurological condition.