

Greater memory and learning performance for language in migraine: Result of a neuropsychological study



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Objectives

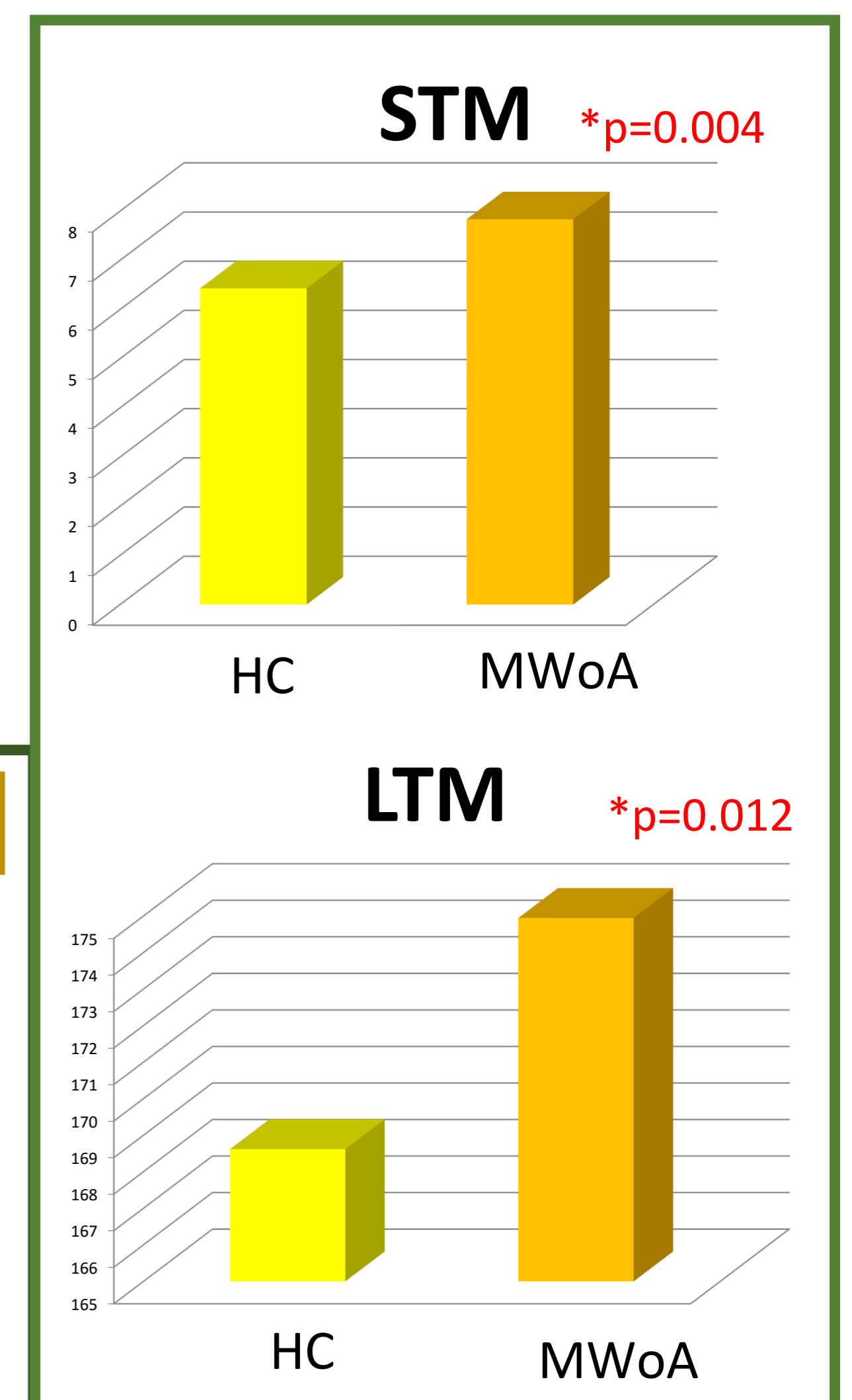
Migraineurs show variable performance to cognitive task evaluating memory, attention and language compared to healthy controls (HC). However reports are somewhat controversial. Migraineurs with aura (MWA) have a sustained attention alteration, not directly related to disease's duration, but this is not evident in postictal phase (Mulder et al 1999). Farmer et al (2000) instead demonstrated that migraine attack is able to produce a significant change in cognitive efficiency up to 45 minutes later. Le Pira et al (2000) found impaired verbal and visuospatial memory performance. The aim of our study is to evaluate the performance in verbal and visuospatial memory task in patients affected by migraine without aura (MWOA) and HC.

Materials and Method

18 HC and 21 MWOA (mean age 28,6 +/- 7,8) were recruited in the Headache Center of Policlinico of Palermo. Inclusion criteria are: age between 18 and 65, education over 8 years. Exclusion criteria are : intake of medication acting on nervous system, psychiatric comorbidity and for HC first-degree relatives affected by migraine. These test were administered: for verbal memory a word list in supraspan modality, for visuospatial memory Corsi test in supraspan modality and for attention Trial Making A e B.

Results

MWOA show better performance than HC in verbal memory task, both short (STM: p.004) and long term (LTM: p.012). There was no statistically significant difference in visuospatial memory task, both short and long term between the two groups. For the attention task, MWOA have best results compared to HC (p.004).



	HC	MWOA	p value
Verbal STM	6.42 +/- 1.46	7.83 +/- 1.42	0.004
Verbal LTM	168.61 +/- 9.56	174.94 +/- 3.6	0.012
Spatial STM	0.91 +/-0.4	0.75 +/-0.39	0.2
Spatial LTM	1.44 +/-0.36	1.41 +/-0.38	0.8
TM A	58.52 +/-9.99	52.88 +/-6.74	0.04
TMA B	129.80 +/-24.64	124 +/-12.97	0.37

Discussion

Our results demonstrate that MWOA and HC differ in verbal memory profile and contribute to the enormous results variability in the literature, probably due to methodological differences in the various studies.

Conclusions

The better performance of MWOA in verbal memory task could be explained on the basis of the cortical hyperexcitability, feature that distinguishes migraineurs's brain. Migraineurs could own more neural resources on cognitive level compared to HC.

Bibliografia

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