

Migraine does not affect pain intensity perception: a cross-sectional study

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Objective

To explore perceived pain intensity (PPI) in three drug-naïve patients' groups characterized by homogeneous migraine phenotypes: migraine without aura without cutaneous allodynia (MwoA CA-), MwoA experiencing ictal CA (MwoA CA+) and migraine with aura without cutaneous allodynia (MwA CA-) compared to age and sex-matched HC.

Methods

Using trigeminal heat stimulation (THS) at three different predefined intensities (41° C, 51° C and 53° C) performed by the contact heat-evoked potential stimulator (CHEPS), PPI was investigated in 34 patients with MwoA CA-, 30 patients with MwoA CA+ and 30 patients with MwA CA- compared to 30 age and sex-matched HC. The patients had never taken migraine-preventive drugs and they were investigated during an interictal period to avoid confounds associated with migraine attack. Secondary analyses evaluated associations between PPI and clinical features of migraine in patients.

Results

No significant differences were observed between the four groups for each experimentally induced stimulus. Moreover, no significant correlations were found between clinical variables and the PPI of the THS at any level of experimental stimuli.

Conclusions

Despite the converging evidence of pain threshold abnormalities in migraine patients, our findings suggest that migraine patients did not exhibit differences in PPI of THS when compared with HC, independently from phenotype, migraine severity as well as somatic, psychiatric or pharmacological interferences. Probably, this may depend from both the nature of the pain stimulus experienced and the involvement of selective regions or specific pain processing pathways.

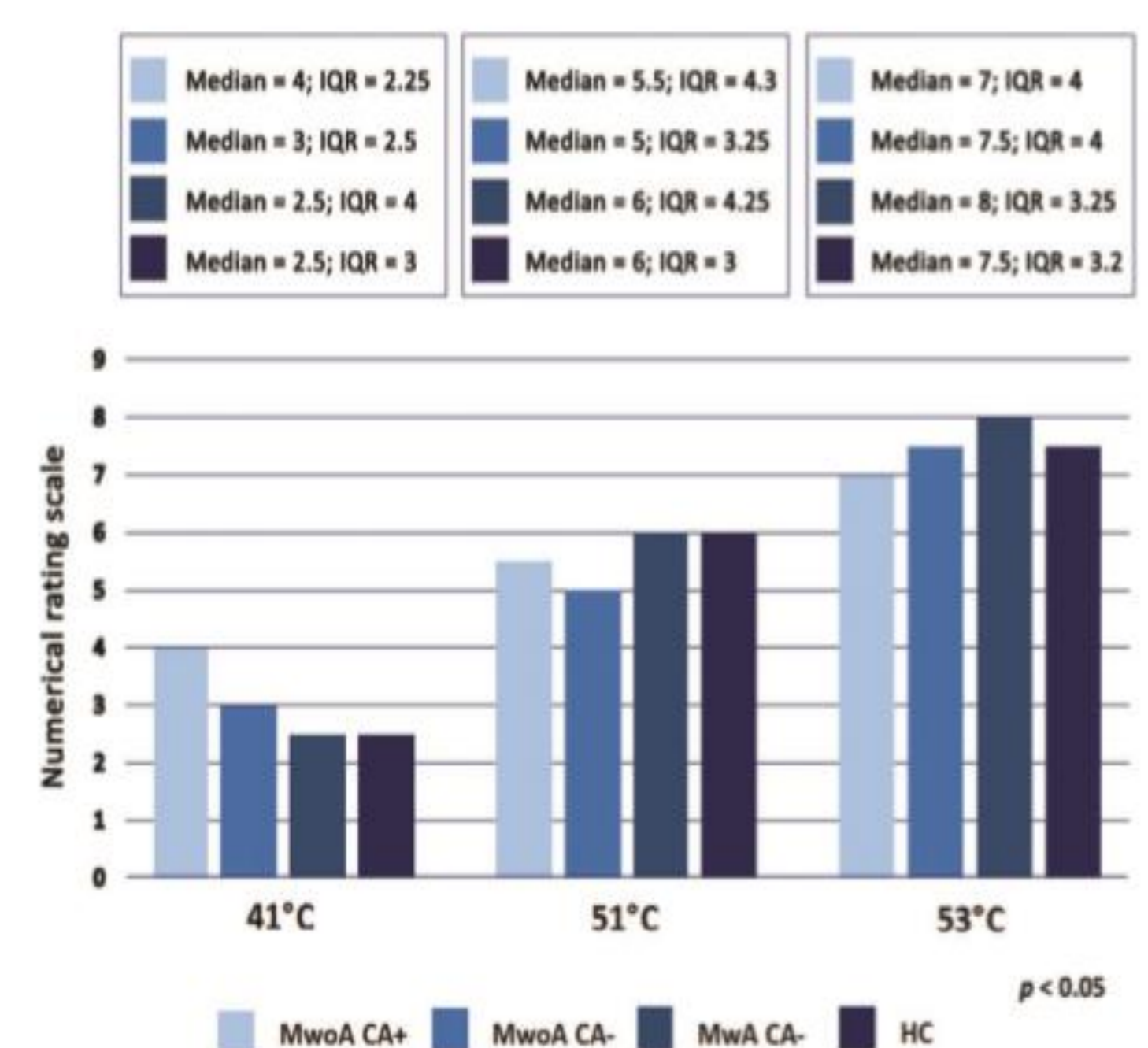
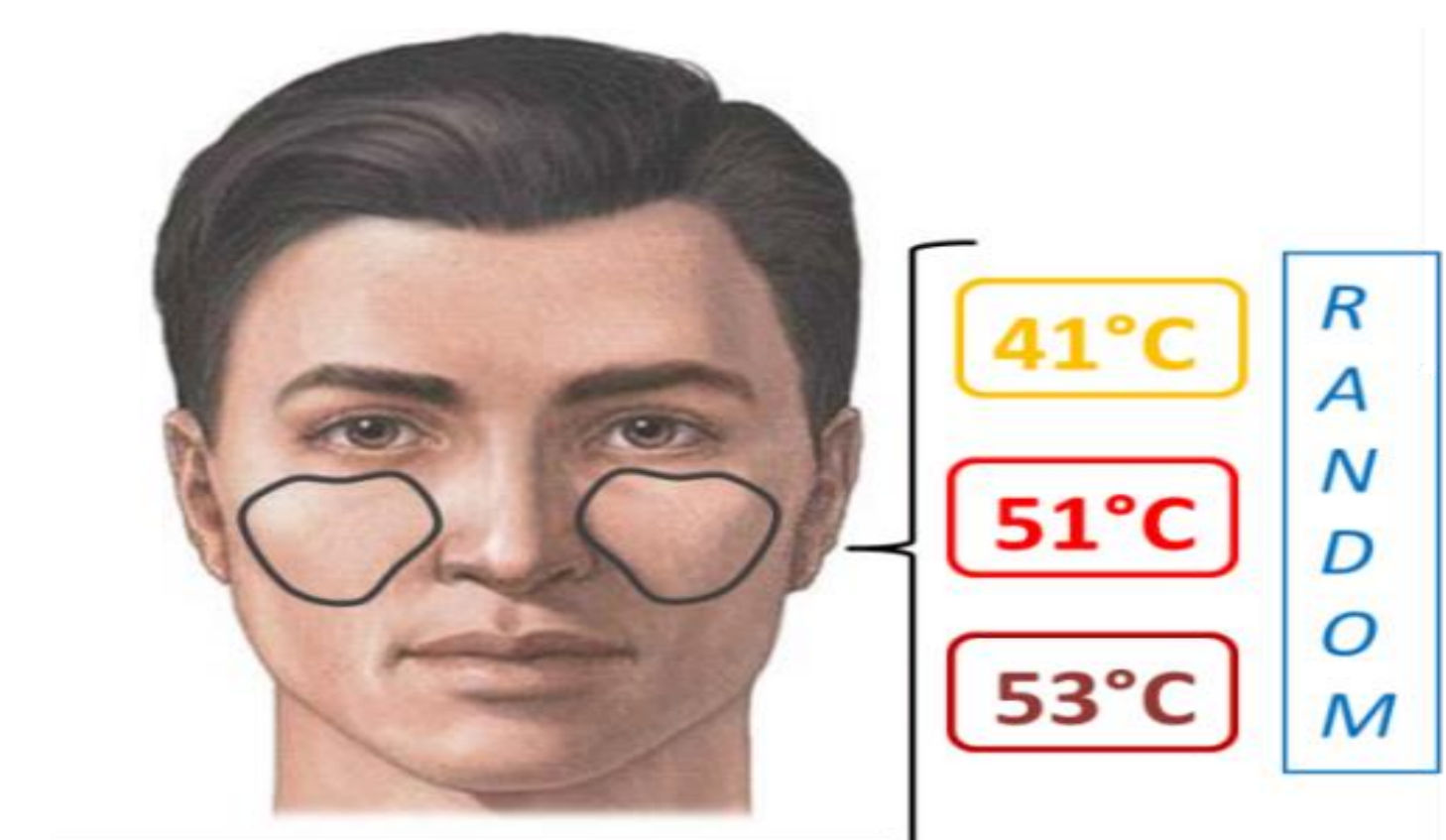


Figure 1 Pain ratings data to innocuous (41°C), moderate-noxious (51°C), and high-noxious (53°C) trigeminal heat stimulation (THS) in patients with MwoA CA+, MwoA CA-, MwA CA-, and HCs. IQR = interquartile range; MwoA CA+ = migraine without aura with cutaneous allodynia; MwoA CA- = migraine without aura without cutaneous allodynia; MwA CA- = migraine with aura without cutaneous allodynia; HC = healthy control.

References

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