

MEETING ABSTRACT

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EHMTI-0285. Frontal thermography in healthy individuals: reliability of the method

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From 4th European Headache and Migraine Trust International Congress: EHMTIC 2014 Copenhagen, Denmark. 18-21 September 2014

Introduction

Infrared Thermography (TH) is useful in making diagnoses and doing evaluations in the field of pain medicine.

Methods

26 volunteers (20 females and 6 males) with a mean age of 32 ± 10 years were examined. Seven volunteers had a history of low frequency migraine. TH has been assessed with an infrared thermal camera (model LT3, Zhejiang Dali Technology Co. Ltd) measuring the spatial distribution of the heat over the face. The image analysis evaluated the temperature in two target points (left (L) and right (R) side) in the frontal polar sites. The measurements were taken in one session (N=26), 19 subjects underwent a second session at least one day apart. The Asymmetry Index (AI) ($100 \times (L \text{ side}/L \text{ side} + R \text{ side})$) was also calculated. Concerning the first test session analysis of variance (ANOVA 1 way), intra-class correlation coefficient (ICC) and Pearson's correlation coefficient were calculated. Measurements between two different days (T1 and T2 session) were evaluated with the ANOVA 2 way with replication.

Results

The analysis of variance showed no significant difference between three consecutive measurements during the first session both on the R side ($p=0.30$) and the L side ($p=0.32$). Both R and LICC measurements showed a good reliability (0.55 and 0.66). TH values in healthy subjects showed no large asymmetry (49.98 ± 0.22). ANOVA 2 way did not reveal intraindividual variations between the first and second testing session on separate days.

Conclusion

TH measurements were rather symmetrical and reproducible on both sides. TH could be a reliable method for the evaluation of localized/lateralized pain syndrome.

No conflict of interest.

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Published: 18 September 2014

doi:10.1186/1129-2377-15-S1-E39

Cite this article as: Voiticovschi-Iosob et al.: EHMTI-0285. Frontal thermography in healthy individuals: reliability of the method. *The Journal of Headache and Pain* 2014 **15**(Suppl 1):E39.

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