

P67**White-matter microstructural changes in episodic menstrual migraine compared with hormonal controls**

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Question: Do patients with episodic menstrual migraine exhibit white-matter microstructural changes?

Methods: 14 women with episodic menstrual migraine (35±8yrs) were assessed during interictal phase together with 11 healthy women (29±10yrs) during a matching phase of their menstrual cycle (post-ovulation). 2D-EPI multi-shell DWI data were acquired on a 3T Siemens Vida (64-ch coil) and preprocessed using DESIGNER [1]. Diffusion tensor / kurtosis imaging (DTI/DKI) parameter maps were estimated and skeletonised [2] and histogram-metrics were computed for each subject: median, peak height, width, and value.

Results: Voxelwise statistical analysis [3] revealed multiple white-matter regions with lower MD and AD in patients, with no differences in FA and RD. Interestingly, migraineurs showed increased MK, AK and RK. Moreover, significant groups differences (Mann-Whitney test with Bonferroni correction) were found in histogram-metrics MD peak value, AD median and peak height and AK median. Median AK was positively associated (Spearman correlation) with disease duration but not with attack frequency and pain intensity.

Conclusion: Our findings extended previous reports of white-matter microstructural changes in migraineurs across multiple brain regions [4, 5]. DKI histogram-metrics showed potential as disease biomarkers.

References:

- [1] Ades-Aron *et al.*, *Neuroimage*, 183, 532–543, 2018.
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- [4] D. Yu *et al.*, *Cephalalgia*, vol. 33, no. 1, pp. 34–42, Jan. 2013.
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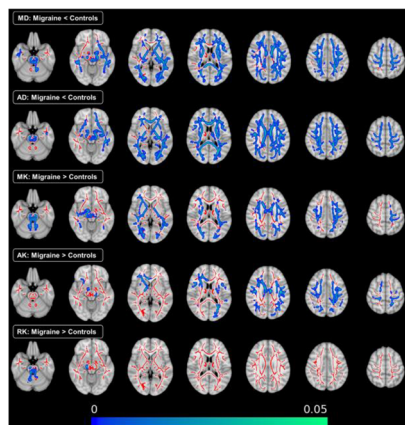


Fig. 1 (abstract P67). Results from voxelwise analysis of mean diffusivity (MD), axial diffusivity (AD), mean kurtosis (MK), axial kurtosis (AK) and radial kurtosis (RK) maps between controls and patients (p-value in blue-green); red represents mean FA skeleton of all subjects

P68**Neuroimaging Utilization in Telemedicine Relative to In-Person Initial Visits for Migraine and Headache at a Tertiary Headache Center: A One-Year Analysis**

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Objective:

During the past two and 1/2 years there has been a marked increase in the use of telemedicine in the treatment of migraine. The purpose of this study was to assess whether there was greater utilization of neuroimaging when initial patient visits for migraine and other headache conditions were conducted via synchronous video telemedicine compared to when such initial visits were conducted in-person.

Methods:

We performed a retrospective chart review of all initial patient visits from September 1, 2021 to August 31, 2022 at a tertiary headache center in the United States (U.S.). We compared the percentage of visits conducted via telemedicine which resulted in an order for neuroimaging to the percentage of visits conducted in-person which resulted in an order for neuroimaging.

Results:

A total of 398 new patient visits were conducted at the tertiary headache center, 109 (27%) of which were telemedicine, and 289 (73%) of which were in-person. Neuroimaging studies were ordered during 19.3% of visits conducted via telemedicine and during 27.3% of in-person visits.

Conclusions:

Neuroimaging studies were ordered 41.5% more frequently during in-person initial visits than during telemedicine initial visits for migraine and other headache conditions at a tertiary headache center. More research is warranted to determine if this phenomenon is due to selection bias, with more severe cases having a greater potential to be secondary headaches being seen in-person rather than via telemedicine, or if other factors are involved. More research is also needed to assess if this phenomenon is unique to tertiary headache centers or if it is also applicable to general neurology and primary care practice settings. As more specialties, including primary care, are caring for even more patients via telemedicine, a clearer understanding of the utilization of neuroimaging in this setting can have important clinical as well as economic implications.

P69**Short-lasting Unilateral Neuralgiform Headache Attacks in China: A Multicenter Study of 76 Patients**

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Background: Short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT) and short-lasting unilateral neuralgiform headache attacks with cranial autonomic symptoms (SUNA), collectively known as short-lasting unilateral neuralgiform headache attacks (SUNHA), has hitherto not been studied sufficiently due to limited data, particularly in China. This study aimed to characterize and compare SUNCT and SUNA, as well as to aid in the identification of appropriate diagnostic and therapeutic strategies.

Methods: Between April 2009 and December 2021, individuals visiting a tertiary headache center or seven other headache clinics in China who were diagnosed with SUNCT or SUNA were included, compared its demographics and clinical characteristics.