HEADACHES IN MITOCHONDRIAL DISORDERS

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Introduction

Headaches are a well-known feature of Mitochondrial Disorders (MCDs). However, no systematic epidemiological data are available in large populations of patients.
We aimed to describe the prevalence and the headache's characteristics of a large group of patients with mitochondrial encephalomyopathies.

Methods

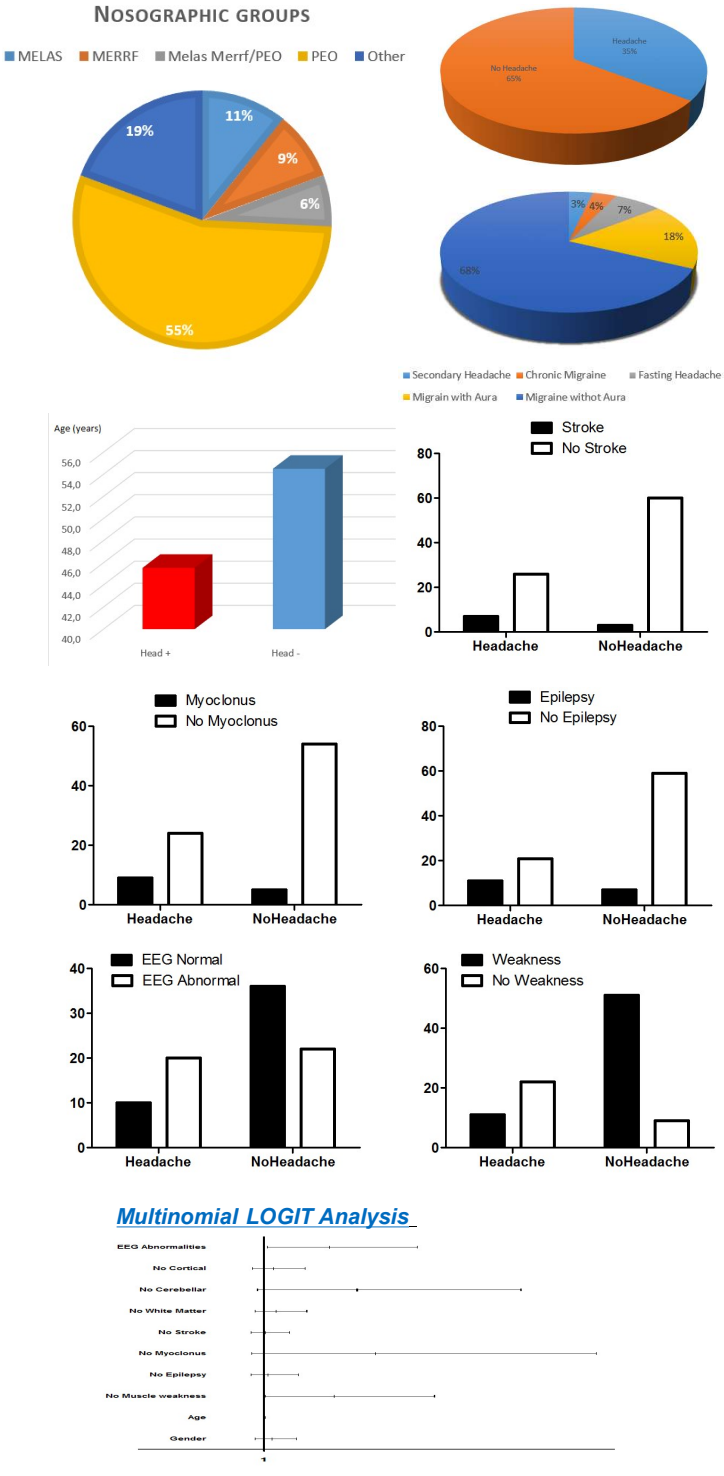
We studied all consecutive patients referred to our Neuromuscular Unit, during a 6-months period. 93 patients (age: 15 to78 years, 31 males) with a typical phenotype of MCDs, underwent a structured diagnostic headache interview, using an operational diagnostic tool following the IHS criteria. If they met the criteria for primary headache, were included in 'Headache Group' (HEAD+). The other patients were collected in 'No-Headache Group' (HEAD-).
Clinical, neuroradiological, and neurophysiological data were compared between groups. Mann-Whitney U-test was used to analyze numeric variables; Fisher's exact test was used to analyze nominal variables. Binary logistic regression analysis was performed to identify risk factors of headache.

Results

Headaches were reported in 35.48% of patients. Migraine was the most common headache. Headache Group showed younger age (HEAD+ =45.5±17.2 years; HEAD- =54.5±14.8 years; U-test=7.393; p=0.007), increased prevalence of epilepsy (p=0.0103), myoclonus (p=0.0309), stroke (p=0.0290), EEG focal slow abnormalities (p=0.0359), EEG epileptic focal abnormalities (p=0.0425), and decreased prevalence of muscle weakness (p<0.0001) and EEG normal pattern (p=0.0136). Multivariate analysis showed that HEAD+ was significantly associated with absence of Muscle Weakness (p=0.049) and EEG abnormalities (p=0.025).

Conclusions

Migraine have higher prevalence in MCDs compared to population-based data.
Our findings are consisted with the widely hypothesized role of mitochondria in Migraine pathophysiology.



Multinomial LOGIT Analysis

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