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Correspondence

MELAS syndrome due to the m.3291T>C mutation

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Dear Editor:

With interest we read the article by Keilland et al. about a 12 yo female with MELAS-syndrome due to the m.3291T>C mutation, manifesting as overlap between MELAS, MERRF, MNGIE, KSS, and CPEO [1]. We have the following comments and concerns.

Apparently, the m.3291T>C mutation does not manifest significantly in the heart [1]. Did the propositus undergo comprehensive cardiologic investigations, including echocardiography and long-term ECG-recordings? Hypertrophic and dilated cardiomyopathy as well as noncompaction, aortic root ectasia, and atrial fibrillation, frequent cardiological manifestations of mitochondrial disorders [2], may go subclinical for years [3]. Ventricular runs may remain asymptomatic when occurring during the night. Were cardiac abnormalities reported in any of the affected/unaffected family members?

Stroke-like episodes (SLEs) have a variable clinical presentation [4]. How did they manifest clinically in the presented patient? Did they also manifest with seizures? In which cerebral region did equivalent stroke-like-lesions occur? Which type of treatment was provided for SLEs? Did the frequency of SLEs decline after initiation of the vitamin-cocktail? Which remnants of the stroke-like-lesions were seen on MRI?

Topiramate is an inhibitor of the mitochondrial carboanhydrase-VB. Topiramate has beneficial [5] and unfavourable effects [6] to mitochondria. As an inhibitor of the mitochondrial transition pore it has an anti-obesity effect but can be also effective in migraine and epilepsy. Did the patient suffer from migraine, a frequent phenotypic manifestation of mtDNA mutations, and did migraine respond to topiramate? Why did she require two antiepileptic drugs in a relatively low dosage? Was reduced weight (35.7 kg at age 15 y) a side effect of topiramate?

The patient presented with clinical manifestations of KSS [1]. Which were the clinical manifestations of KSS? Was there an AV-block-III? Did she require a pacemaker? Was CSF protein elevated?

Overall, this interesting case report requires a detailed description of the phenotype, a more comprehensive cardiologic investigation, and an explanation of the antiepileptic regimen.

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