pISSN 1738-6586 / eISSN 2005-5013 / J Clin Neurol 2022;18(5):599-600 / https://doi.org/10.3988/jcn.2022.18.5.599

Re: Comments on "A Case of MELAS With the m.3243A>G Variant of the MT-TL1 Gene Mimicking Acute Intermittent Porphyria": The Authors Respond

Wenjie Cai[a]
Xiang Han[b]
Shilin Yang[b]

[a]Harvard T.H. Chan School of Public Health, Boston, Massachusetts, USA.
[b]Department of Neurology, Huashan Hospital, Fudan University, Shanghai, China

Dear Editor,

We would like to thank you for the opportunity to respond to the letter to the editor[1] regarding our case report.[2] We would also like to express our appreciation to the authors of that letter for taking the time to report their concerns and comments.

Regarding the first point mentioned in the letter to the editor, intestinal pseudo-obstruction (IPO) has been observed in mitochondrial encephalopathy, lactic acidosis, and stroke-like episode (MELAS) syndrome patients, particularly in those with the m3243A>G variant. However, it is most commonly observed in mitochondrial neurogastrointestinal encephalomyopathy (MNGIE), and it is not a common symptom in MELAS patients, and remains an underrecognized condition.[3,4] We mentioned IPO in our case report in order to remind readers of the need to make a differential diagnosis between MELAS and acute intermittent porphyria (AIP) when seizures and peripheral neuropathy coexist with IPO. Another interesting characteristic of IPO in our patient was that it appeared acutely during hospitalization and so could be immediately released by gastrointestinal decompression, which differs from some previous cases where chronic or subacute IPO occurred in a chronic phase or even represented the first complaint of the patients.[4-6] The characteristics of IPO in our patient are consistent with the statement made based on a cohort study in the UK that IPO can occur throughout the entire spectrum of m.3243A>G-related disease.[3]

According to Fig. 1,[2] the patient presented with difficulties in tightly shutting the eyes and puffing out the cheeks, which are manifestations of bilateral peripheral facial paralysis. There was no bilateral ptosis or obvious hypertelorism. Since peripheral neuropathy is common in AIP, we first performed a differential diagnosis that included AIP.

We considered the multiple enhanced T1-weighted lesions that were hypointense in susceptibility-weighted imaging to be imaging manifestations of leakage of the contrast agents and microbleeds due to damage to the blood–brain barrier.

Our patient had obvious facial nerve involvement and peripheral neuropathy, and only mild myogenic damage was evident in electromyography (EMG). Thus, the dysarthria and dysphagia were considered to be due to neurogenic impairment of the glossopharyngeal or/and vagal nerves.

We did not perform a biochemical investigation of the muscle homogenate or analyze the heteroplasmy rate of the m.3243A>G variant in various affected tissues due to limitations in the ability to perform the laboratory techniques. EMG demonstrated predominantly axonal motor peripheral neuropathy. Unfortunately, the mother of the patient was not investigated clinically or genetically. We would like to thank the authors for their advice; we may perform the suggested tests in the future.

Received August 9, 2022
Revised August 9, 2022
Accepted August 9, 2022

Correspondence
Xiang Han, MD
Department of Neurology, Huashan Hospital, Fudan University, No. 12, Wulumuqi Road (M), Jingan District, Shanghai 200040, China
Tel +86-21-52889999
Fax +86-21-62091692
E-mail hansletter@fudan.edu.cn

Shilin Yang, MD
Department of Neurology, Huashan Hospital, Fudan University, No. 12, Wulumuqi Road (M), Jingan District, Shanghai 200040, China
Tel +86-21-52889999
Fax +86-21-62091692
E-mail yangshilin@gmail.com

Ethics Statement

Not applicable

Availability of Data and Material

Data sharing not applicable to this article as no datasets were generated or analyzed during the study.

ORCID iDs

Wenjie Cai https://orcid.org/0000-0003-2377-9064
Xiang Han https://orcid.org/0000-0003-4608-2083
Shilin Yang https://orcid.org/0000-0001-8480-541X

Author Contributions

Conceptualization: Shilin Yang. Funding acquisition: Shilin Yang. Project administration: Shilin Yang. Supervision: Shilin Yang, Xiang Han. Validation: Shilin Yang, Xiang Han. Writing—original draft: Wenjie Cai. Writing—review & editing: Shilin Yang.

Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

Funding Statement

This study was supported by Shanghai Municipal Health Commision (grant number 20204Y0425).

REFERENCES

1. Finsterer J. Comments on "A Case of MELAS With the m.3243A>G Variant of the MT-TL1 Gene Mimicking Acute Intermittent Porphyria." *J Clin Neurol* 2022;18:597-598.
2. Cai W, Yang S, Han X. A case of MELAS with the m.3243A>G variant of the MT-TL1 gene mimicking acute intermittent porphyria. *J Clin Neurol* 2022;18:361-363.
3. Ng YS, Feeney C, Schaefer AM, Holmes CE, Hynd P, Alston CL, et al. Pseudo-obstruction, stroke, and mitochondrial dysfunction: a lethal combination. *Ann Neurol* 2016;80:686-692.
4. Gagliardi D, Mauri E, Magri F, Velardo D, Meneri M, Abati E, et al. Can intestinal pseudo-obstruction drive recurrent stroke-like episodes in late-onset MELAS syndrome? A case report and review of the literature. *Front Neurol* 2019;10:38.
5. Chang TM, Chi CS, Tsai CR, Lee HF, Li MC. Paralytic ileus in MELAS with phenotypic features of MNGIE. *Pediatr Neurol* 2004;31:374-377.
6. Miyanaga R, Tanaka M, Nonaka T, Shizukawa H, Shimohama S. [A case of mitochondrial myopathy, encephalopathy, lactic acidosis, and stroke-like episodes (MELAS) complicated by chronic intestinal pseudo-obstruction]. *Rinsho Shinkeigaku* 2022;62:464-468.