NDUFA2 mutations cause multisystem mitochondrial disorder.

Josef Finsterer1*, Fulvio A. Scorza2

1Hospital Rudolfstiftung, Vienna, Austria
2Discipline of Neuroscience, Paulista School of Medicine, Federal University of (EPM/UNIFESP), Sao Paulo, Brazil

Letter to the Editor

In a recent article by Perrier et al. two paediatric patients with a nonspecific mitochondrial multiorgan disorder syndrome (MIMODS) due to a mutation in the NDUFA2 gene were presented [1]. One of these patients also carried a second mutation in the SLC25A4 gene, manifesting as primary carnitine-deficiency [1]. The paper raises a number of comments and concerns.

Patient-1 obviously had a double trouble from mutations in the NDUFA2 and the SLC25A4 genes [1]. Which of the clinical manifestations were attributable either to the one or the other mutation? Which of the clinical manifestations were attributable to both mutations?

Patient-1 is reported to have had severe carnitine-deficiency [1]. Was the patient substituted with L-carnitine and did the clinical manifestations attributable to carnitine-deficiency improve? Particularly patients with primary carnitine-deficiency have been reported to respond favourably to substitution with L-carnitine [2].

One sibling of patient-1 died at age 3y but it is not reported if this particular sibling was also affected by RRM1B-associated disease. Did this sibling undergo genetic testing before or after decease?

Did any of the heterozygous parents of patient-1 manifest clinically and which were the clinical manifestations in the parents? Did the parents of patient-1 also carry the SLC25A4 mutation? Did they also manifest with carnitine-deficiency?

Contrary to the statement provided by the authors, the case presented by Vanderver et al. [3] lacks a detailed clinical description and supplementary material is not accessible via the provided link, thus cannot be compared on a clinical basis with the case presented by the authors (Table 1). There is also a marked discrepancy between the phenotype provided by the authors and the phenotype reported by Hoefs et al. in [4].

Overall, this interesting study may profit from provision of more clinical and genetic data and from discussing in more detail the differences between the three patients so far reported.

Table 1. Clinical manifestations in the three patients carrying a NDUFA2 mutation so far reported. Nm: not mentioned, c: corpus, cs: corticospinal

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microcephaly</td>
<td>no</td>
<td>yes</td>
<td>nm</td>
</tr>
</tbody>
</table>

References


*Correspondence to:
Josef Finsterer, MD, PhD
Hospital Rudolfstiftung
Vienna, Austria
Tel: +43-1-71165
E-mail: fifigs1@yahoo.de