Migratory Rolandic Encephalopathy Caused by the Mitochondrial ND3 Mutation

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Kunqian Ji: Drafting/revision of the manuscript for content, including medical writing for content
Hong Ren: Analysis or interpretation of data
Xiuhe Zhao: Major role in the acquisition of data
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An 18-year-old woman was admitted to the hospital for focal seizures. Serial MRI studies showed migratory Rolandic lesions (figure A-D), and the EEG showed sharp waves when the lesion appeared. The initial differential diagnosis included cerebral venous thrombosis, MOGAD and metabolic disorders. MRV, serum and CSF analyses were unrevealing. An analysis of the entire mtDNA of urine sediment by NGS showed a pathogenic m.10191T>C mutation in the mt-ND3 gene (mutation load, 87%). Further analysis revealed the m.10191T>C variant was heteroplasmic in blood (24%) and oral mucosal (86%) cells. This case illustrates that m.10191T>C mutation may
present with migratory Rolandic encephalopathy\(^1\).

### Appendix Authors

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### References

Figure. MRI findings of Migratory Rolandic Encephalopathy

FLAIR image of the patient at the initial neurologic examination 1 year ago (A) and the tiny lesion at the left Rolandic cortex disappeared 2 months later (B) and reappeared 9 months later (C). Then additional similar tiny lesions developed in the right Rolandic cortex later (D).
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