Author's response to reviews

Title: Usefulness of Multimodal MR Imaging in the Differential Diagnosis of HaNDL and Acute Ischemic Stroke

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Author's response to reviews: see over
We agree that for most of the centers is not possible to obtain an immediate multimodal MR imaging in each case of stroke. Therefore we have added some explanations about the special situation in our case (patient's medical history and the awareness of this special illness), what led us to obtain multimodal MR imaging and, given that the findings, to suspect HaNDL.
1- We have changed *holocranial* by *holocranial*
2- We have added the patient’s mental status in the report
3- We agree that our results are conflicting with ICHD-II criteria for HaNDL. We have highlighted this fact in a final phrase: “In spite of the ICHD-II diagnostic criteria, which state that neuroimaging findings are normal in HaNDL, our experience, along with that of others, demonstrate that neuroimaging tests show cerebral hypoperfusion in this syndrome. We propose that this new information be added in a future revision of the International Classification of Headache Disorders”
4- We have reviewed our FLAIR images, but they seem normal
5- We agree with the reviewer, and therefore we have added this text in the discussion of the case report: “The basic clue to consider HaNDL should be the presence of accompanying headache and vomiting in an acute stroke patient with gradual onset of neurological symptoms”
6- We have also added a sentence to express this: “Although HaNDL syndrome is a rare disease, neurologist should be aware of it, mainly in the emergency room”
REVIEWER: Marcel Aries

We have tried to stress the importance of medical history in the suspect of HaNDL. So we have added the following text "The basic clue to consider HaNDL should be the presence of accompanying headache and vomiting in an acute stroke patient with gradual onset of neurological symptoms. In case of suspecting this syndrome, multimodal MRI stands out as a useful tool, mainly when facing stroke code patients". Moreover, additional comments about other case reports that also show that “perfusion techniques give evidence of a decreased and delayed perfusion pattern in an entire hemisphere” have been added. We have no definitive arguments to recommend CT or MRI; although CT perfusion techniques are faster, probably brain hemisphere circulation and a potential ischemic damage are best assessed by means of multimodal MRI.

No genetic tests for familial hemiplegic migraine were performed. These tests are complex and expensive. Three genes have been identified studying families with FHM (CACNA1A, ATP1A2 and SCN1A), and all families are not linked to them. In the literature, there is a report testing 8 patients diagnosed with pseudomigraine with lymphocytic pleocytosis that failed to identify any mutations of the CACNA1A gene.

Our patient had no family history of migraine.
REVIEWER: Robert Nighoghossian

We have added the new reference suggested by the reviewer, which has a great interest for the discussion of our case report.