

**Letter to the Editor**

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## Discrepancy between clinical presentation and cerebral imaging requires further diagnostic effort

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**Introduction**

We read with interest the article by Mabel *et al.* on a 62 years-old male who suddenly developed right-sided facial weakness, dysarthria, vertigo, blurred vision, and right-sided hemiparesis<sup>[1]</sup>. Despite this presentation, the patient was surprisingly diagnosed as Bell's palsy initially<sup>[1]</sup>. Magnetic resonance imaging (MRI) revealed a pontine ischemic stroke<sup>[1]</sup>. It was concluded that "a thorough neurological examination and good clinical correlation with the patient's history and physical findings, coupled with the use of facial nerve anatomical knowledge and early employment of MRI, are imperative in clinching the diagnosis<sup>[1]</sup>. The study is attractive but raises concerns that should be discussed

We disagree with the notion that the index patient had "isolated" facial weakness respectively Bell's palsy. In addition to facial palsy the patient had dysarthria, blurred vision, vertigo, and right-sided hemiparesis.

Arguments for ischemic stroke and against Bell's palsy in the index patient are that facial weakness had an acute onset, that the patient had dysarthria in addition to facial weakness, that the cardiovascular risk profile was positive for diabetes, hyperlipidemia, and arterial hypertension, that blood pressure was increased to 192/119mmHg on admission, and that the patient had developed right-sided hemiparesis for 2 days. In view of these facts it is surprising that isolated facial weakness respectively Bell's palsy was initially considered in the index patient.

There is a discrepancy between the unilateral clinical presentation and the central location of the pontine lesion as presented in figure 2. The central pontine lesion does not explain right-sided facial weakness and right-sided hemiparesis.

According to the clinical exam right-sided facial weakness was of the peripheral type. Since lesions of the facial nucleus also present the peripheral type of facial weakness it is crucial to rule out a central cause in patients with a cardiovascular risk profile as in the index patient.

Missing is an explanation or blurred vision. The MRI findings do not explain blurring. We should be told for how long blurring persisted and if this was due to arterial hypertension or diabetic retinopathy. Missing is the information about the HbA1c value.

Missing are the results of funduscopy.

Missing is the exact course of the clinical manifestations. We should be informed about onset and end of each of clinical presentations, facial weakness, dysarthria, vertigo, blurring, and right-sided hemiparesis.

Missing is the information if the patient was SARS-CoV-2 negative or positive on admission. Missing is a follow-up MRI to assess if the central pontine lesion persisted or resolved.

The discrepancy between dysarthria and the statement that except for the facial nerve all other cranial nerves were intact should be solved. Of particular interest is if there were any sensory disturbances, hypogeusia, or hearing impairment. Since the patient had dysarthria, involvement of the 9<sup>th</sup> and 10<sup>th</sup> cranial nerve needs to be ruled out.

Overall, the interesting study has some limitations that call the results and their interpretation into question. Clarifying these weaknesses would strengthen the conclusions and could improve the study. Since cerebral imaging does not explain the clinical presentation, alternative causes should be considered.

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Compliance with Ethics Guidelines: This article is based on previously conducted studies and does not contain any new studies with human participants or animals performed by any of the authors.

### References

1. Mabel HM, Othman NB, Cheah WK. Pontine stroke: a rare mimicker of Bell's palsy. Med J Malaysia. 2022; 77(3):403-405.