

PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 86923

Title: Ultrafast power Doppler imaging for ischemic encephalopathy: A case report

Provenance and peer review: Unsolicited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05291028

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Spain

Author's Country/Territory: China

Manuscript submission date: 2023-09-04

Reviewer chosen by: Geng-Long Liu (Quit 2023)

Reviewer accepted review: 2023-09-05 05:55

Reviewer performed review: 2023-09-05 07:29

Review time: 1 Hour

Scientific quality	☐ Grade A: Excellent ☒ Grade B: Very good ☐ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Novelty of this manuscript	☒ Grade A: Excellent ☐ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No novelty
Creativity or innovation of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No scientific significance
Language quality	☐ Grade A: Priority publishing ☒ Grade B: Minor language polishing ☐ Grade C: A great deal of language polishing ☐ Grade D: Rejection
Conclusion	☐ Accept (High priority) ☐ Accept (General priority) ☒ Minor revision ☐ Major revision ☐ Rejection
Re-review	☒ Yes ☐ No
Peer-reviewer statements	Peer-Review: ☒ Anonymous ☐ Onymous
	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

In this case note, ultrafast power Doppler imaging (uPDI) -a new noninvasive and highly sensitive microvascular imaging technology - was used for the first time to observe the microvessels involved in cortical laminar necrosis and luxury perfusion in the brain in a pediatric 4-year-old girl who had severe hypoperfusion after brain herniation and underwent decompression craniectomy due to refractory intracranial hypertension after giant intracranial mesenchymal chondrosarcoma surgery. The authors suggests that uPDI is, potentially, a more intuitive and noninvasive method for evaluating the effects of severe intracranial hypertension and cerebral microvessels and uPDI images can accurately identify anatomical and hemodynamic characteristics. This case report is potentially interesting, but the manuscript can be improved according to the following suggestions: 1. It should be noted in the Discussion, that ultrafast power Doppler imaging could also be potentially used in adult patients with malignant middle cerebral artery infarction a devastating type of ischemic stroke (Rev Invest Clin 2015: 67: 64-70). It is recommended that this reference be included and commented upon. 2. Please add this bibliographic reference (World J Clin Cases. 2013 Nov 16;1(8):256-9. doi:



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10.12998/wjcc.v1.i8.256. PMID: 24340278; PMCID: PMC3856303) related to cortical laminar necrosis in the text. 3. It would be interesting if the authors included in the text some of the limitations of this case note. 4. A brief concluding comment on possible lines of future research on the topic presented would be appreciated.

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Reviewer's code: 02663375

Position: Peer Reviewer

Academic degree: MD

Professional title: Academic Research, Doctor

Reviewer's Country/Territory: Italy

Author's Country/Territory: China

Manuscript submission date: 2023-09-04

Reviewer chosen by: Geng-Long Liu (Quit 2023)

Reviewer accepted review: 2023-09-05 11:56

Reviewer performed review: 2023-09-05 14:28

Review time: 2 Hours

Scientific quality	☐ Grade A: Excellent ☒ Grade B: Very good ☐ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Novelty of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No novelty
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	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

This is an interesting article that needs some improvements. These are my comments:

-Abstract: Background It is stated that “Compared to traditional ultrasound Doppler imaging, uPDI has the advantages of being noninvasive, convenient, highly sensitive, and able to show microvessels in high resolution images”. This statement is incorrect. In fact, traditional ultrasound Doppler imaging also is noninvasive and convenient. These two words must be deleted. -What does it mean “fine vessels”? Do you mean small vessels or microvessels? If so, please change. - Treatment: spell out the “OR” abbreviation. -The description of the ultrasound system and how uPDI images are obtained does not belong to the discussion. It should be moved into the presentation of the case in a separate section.