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Reply:

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AJNR Am J Neuroradiol 2015, 36 (4) E31

doi: <https://doi.org/10.3174/ajnr.A4268>

<http://www.ajnr.org/content/36/4/E31>

This information is current as
of August 13, 2025.

REPLY:

Various methods and scales had been used in the past for grading brain edema in posterior reversible encephalopathy syndrome (PRES). To date, there is no unified method of grading cerebral edema in PRES, which has created confusion in interpreting the severity of this syndrome. It is therefore necessary to adopt a unified standard method for grading the severity of cerebral edema in quantitative PRES studies. Because the main focus of our study was on determining the spectrum of neuroimaging features in patients with eclampsia, we applied the method on the basis of the extent of hyperintensity and involvement of atypical locations for the grading of PRES.¹ We agree that the method of grading edema adopted by Gao et al,² which integrates the locations and extent of edema in each location, is a better one because it avoids the disadvantage of just relying on the most severely involved region.

Gao et al² have shown that serum levels of lactate dehydrogenase (LDH) correlate with the degree of cerebral edema. However, we did not find any significant correlation of the severity of PRES with not only LDH but also other biomarkers of endothelial dysfunction like uric acid and creatinine. Even Gao et al could not establish the relation between other biochemical parameters and the degree and type of cerebral edema. We postulated that because eclampsia is a multisystem disorder, it is associated with wide-

spread endothelial dysfunction and not just cerebral endothelial dysfunction. None of these markers are specific for cerebral vascular endothelium. Hence their elevation just suggests diffuse endothelial dysfunction, and absolute values may not correlate with the degree of cerebral endothelial dysfunction and hence with severity of cerebral edema or, for that matter, the extent of edema.³ Therefore, more studies are required not only warranting the exact relationship of serum LDH with severity of cerebral edema in PRES, but also trying to identify specific biomarkers of cerebral vascular endothelium and establishing its relationship with the severity of PRES.

REFERENCES

1. McKinney AM, Short J, Truwit CL, et al. **Posterior reversible encephalopathy syndrome: incidence of atypical regions of involvement and imaging findings.** *Am J Roentgenol* 2007;189:904–12
2. Gao B, Liu FL, Zhao B. **Association of degree and type of edema in posterior reversible encephalopathy syndrome with serum lactate dehydrogenase level: initial experience.** *Eur J Radiol* 2012;81:2844–47
3. Junewar V, Verma R, Sankhwar PL, et al. **Neuroimaging features and predictors of outcome in eclamptic encephalopathy: a prospective observational study.** *AJNR Am J Neuroradiol* 2014;35:1728–34

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<http://dx.doi.org/10.3174/ajnr.A4268>