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Reply:

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We thank Dr Kato and his colleagues for their interest and supportive comments on our recent article published in the February 2009 issue of the *American Journal of Neuroradiology*.[1] In this study, we investigated the gray matter volume differences between patients at early stages of subacute sclerosing panencephalitis (SSPE) (stages 1 and 2) and healthy control subjects. We also studied the correlations between clinical findings and gray matter loss in patients. We quantified the patients' neurologic states by using the Neurologic Disability Index (NDI).[2,3] The results of voxel-based statistical analyses revealed cortical gray matter loss in the patients' frontotemporal regions. However, there was no association between patients' cortical gray matter distribution and NDI scores. The patients' neurologic states were distributed in a narrow range (NDI scores ranged between 10 and 25), and the behavioral and emotional changes were the only symptoms in most of our patients. Thus, the lack of a correlation between the NDI scores and gray matter volume changes might be because we studied only patients in the initial stages of the disease, and their clinical states were distributed in a narrow range.

Dr. Kato and his colleagues stated that they use a modified version of the Functional Independence Measure (FIM) to evaluate the neurologic status of their patients with SSPE. They hypothesized that the use of FIM would widen the narrow scoring ranges of NDI in our study, which would be useful for investigating correlations between the clinical status and volumetric gray matter changes. NDI is a clinical scale for rating mental, motor, and sensory functions of patients. There are other scales such as the Hacettepe Mental Scale to evaluate the neurologic status of patients with SSPE.[4] The NDI is a common neurologic scale used in previous studies investigating the clinical and imaging findings in patients with SSPE; we preferred the NDI in our study because it was a common and well-tested method to rate the neurologic status of patients with SSPE in previous studies.[2,3]

As we had stated as a limitation of our study, we did not rate the severity of behavioral and emotional symptoms, and we could not investigate the association between volumetric changes in gray matter and the severity of behavioral symptoms. Although the comparison analysis revealed the gray matter reduction in the emotion-related regions of our patients, a correlation analysis would be helpful to investigate the association of the severity of emotional symptoms and gray matter distribution.

References

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