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REPLY:

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REPLY:

We would like to thank Dr Labauge and colleagues for their thoughtful reading of our recent article “Brain Magnetic Susceptibility Changes in Patients with Natalizumab-Associated Progressive Multifocal Leukoencephalopathy” (NTZ-PML).¹

For the survival and functional outcome of patients treated by NTZ, it is crucial to detect PML on the basis of brain MR imaging before symptom onset, when brain involvement is more localized. This is the first clinical report showing the magnetic susceptibility changes in brain NTZ-PML lesions from the asymptomatic to the chronic stages with different MR imaging scanners (1.5T and 3T) and different MR images (T2* and SWI). In this preliminary study, we did not assess the diagnostic accuracy of the hypointense rim sign on susceptibility-weighted MR images for the diagnosis of asymptomatic NTZ-PML, but our data suggest the major role of this technique in clinical routine. Thus, as suggested by Dr Labauge and colleagues, we believe that susceptibility-weighted MR images should be systematically included in the MR imaging protocol performed in patients with suspected PML.

SWI is now available on most MR imaging scanners and should be preferred to T2* due to the higher spatial resolution and the improved lesion conspicuity inherent to this technique. In our experience, SWI was much more sensitive than T2* in detecting a subtle hypointense rim involving the U-fibers, particularly at the asymptomatic stage. Assessing iron accumulation by quantitative susceptibility mapping must be useful as well to better understand the pathophysiology of this new imaging feature, as previously suggested.² However, this approach still needs postprocessing time and cannot be performed in daily clinical practice.

SWI should be interpreted according to other signal anomalies previously reported in the literature for the early diagnosis of PML, including perivascular punctate lesions (enhanced or not on postcontrast T1WI) and hyperintensities on diffusion-weighted images.^{3,4} Awareness of these specific lesion patterns and the use of an adequate MR imaging protocol facilitate an earlier diagnosis of asymptomatic NTZ-PML, associated with a more favorable prognosis.

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