Editors' Note: In reference to "Anti-JC virus antibodies in a large German natalizumab-treated MS cohort" by Trampe et al., Mr. Zahednasab discusses why testing for anti-JC virus antibodies in urine may be more effective than serum sampling. He also comments that patients taking IFN- β should have been excluded as it can falsely decrease those patients' JCV titers. The authors uphold their methodology, responding that urinary JCV-DNA has a low predictive value and that, by not excluding patients with previous IFN- β treatment, their cohort is most representative of clinical practice.

Megan Alcauskas, MD, and Robert C. Griggs, MD

EARLY EEG CORRELATES OF NEURONAL INJURY AFTER BRAIN ANOXIA

Carlene Stanko, WD Freeman, Jacksonville, FL:

Rossetti et al.¹ reported on early EEG correlates of neuronal injury after brain anoxia. They studied 61 cardiac arrest patients treated with therapeutic hypothermia (TH) with continuous (24–48 hours) or 20–30 minutes EEG. We reviewed our hypothermia database from 2006 to 2012 and found 91 patients who received TH for cardiac arrest. Nine patients received EEG similar to the methods Rossetti et al.¹ described, 8 of which (89%) occurred within the last 3 years. Three patients had suppression burst (SB) activity on EEG and all died (cerebral performance category [CPC] = 5). The remaining 6 patients did not have SB pattern on EEG, 2 had CPC 1–2 (good) outcome and at least 7 Hz background on EEG. Of these, 4 patients had a CPC outcome of 5 and EEGs with δ , θ , or α background cerebral activity except 1 patient with generalized periodic epileptiform discharges (GPEDs). Therefore, SB pattern and GPEDs on EEG had 100% specificity for poor prognosis whereas other EEG rhythms had poor specificity and sensitivity for eventual outcome. The data of Rossetti et al. support the need for multimodal prognostic research trials for TH-treated cardiac arrest patients similar to other forms of brain injury.²

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1. Rossetti AO, Carrera E, Oddo M. Early EEG correlates of neuronal injury after brain anoxia. *Neurology* 2012;78:796–802.
2. Ko SB, Choi HA, Parikh G, Helbok R, et al. Multimodality monitoring for cerebral perfusion pressure optimization in comatose patients with intracerebral hemorrhage. *Stroke* 2011;42:3087–3092.

ANTI-JC VIRUS ANTIBODIES IN A LARGE GERMAN NATALIZUMAB-TREATED MS COHORT

Hamid Zahednasab, Tehran, Iran: Trampe et al.¹ should be commended for their investigation into the rate of seropositivity of the anti-JC virus (JCV) antibodies in a German multiple sclerosis (MS) cohort treated with natalizumab. Further points need to be considered.

Trampe et al.¹ investigated the rate of anti-JCV antibodies by using a confirmatory 2-step ELISA on 2,782 blood samples. Although the serum sample is a good option for the detection of anti-JCV antibodies by ELISA method, it would be more accurate if they measured JCV-DNA in the urine samples of patients with MS. It has been shown that the subjects who developed progressive multifocal leukoencephalopathy (PML) in the longitudinal cohort had detectable JCV-DNA in urine at all time points whereas serum or blood from patients with PML were always negative before the onset of disease.² This same report also showed that 4 subjects with JCV-DNA in urine and undetectable anti-JCV antibodies were retested for anti-JCV antibodies and 3 out of 4 resulted positive. Thus, it would be more plausible that testing JCV-DNA in urine is complementary to testing anti-JCV antibodies to monitor patients at risk of PML.

Patients taking IFN- β should be excluded from this study. It has been shown that the administration of IFN- β can lead to the reduction of JCV genome³ and may result in a false-negative due to decreasing the JCV titer.

Author Response: Anne-Kathrin Trampe, Anke Stroet, Ralf Gold, Andrew Chan, Bochum, Germany: Dr. Zahednasab indicates that several studies have investigated JCV-DNA in urine as a potential

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Early EEG Correlates of Neuronal Injury After Brain Anoxia

Carlene Stanko and WD Freeman

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