

**Editors' Note:** In WriteClick this week, Mr. Zahednasab argues that the status of the disease of a patient with multiple sclerosis (MS) is relevant when discussing viruses and MS. He supports his claim, as is customary in scholarly writing, with a reference. The authors respond simply that the referenced study "has been challenged," a statement that this editor plans on appropriating for frequent use in the future. The authors similarly defend their opposition with a reference. Two dueling studies with equal methods, published in the same journal, produce contradictory results on their way to polar opposite conclusions.

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

#### NEUROLOGIC DISABILITY: A HIDDEN EPIDEMIC FOR INDIA

**Nitin K. Sethi, New York:** Das et al.<sup>1</sup> examined the epidemic of neurologic disability in India. As the authors noted, it is not just hidden but ignored. In large metropolitan areas such as New Delhi and Mumbai, excellent health care facilities currently exist for the treatment of acute stroke, traumatic brain injuries (TBI), and neurodegenerative conditions such as dementia. Patients from neighboring cities and villages flock to these centers to receive care. The time period after patients leave the hospital is the problem that is ignored by the government and medical community. In the absence of comprehensive TBI and stroke rehabilitation centers, patients are discharged and the burden of care falls on family and close friends. With few patients receiving comprehensive speech, physical, and occupational therapy, neurologic outcomes are poor, which adds to disease burden. In countries like India where resources are limited and demands high, neurologic disability from TBI and stroke can only be reduced if the emphasis is on prevention by modification of respective risk factors. This should be reflected in the national health policies of these countries, with adequate allocation of resources toward primary prevention of TBI and stroke as well as establishment of nursing homes and other subacute facilities to take care of these patients after discharge.

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1. Das A, Botticello AL, Wylie GR, Radhakrishnan K. Neurologic disability: a hidden epidemic for India. *Neurology* 2012;79:2146–2147.

**Mamta Bhushan Singh, New Delhi:** I read the article by Das et al.<sup>1</sup> with interest. Das et al.<sup>1</sup> correctly identify TBI, dementia, and stroke as contributors to the epidemic of neurologic disability. Epilepsy should also be included. Epidemiologic studies have suggested that there are 10–12 million Indians with epilepsy and approximately 73%–78% are not receiving appropriate treatment.<sup>2</sup> Within India, the treatment gap varies widely between the rural and urban regions and a treatment gap of up to 90% has been reported for rural populations.<sup>3</sup> Disability in epilepsy remains largely hidden. The connection with disability in the context of epilepsy is rarely discussed. When it is mentioned, intellectual disability is often the focus. Untreated or inadequately treated epilepsy commonly leads to other forms of disability: loss of an eye, limb, teeth, or digit, or burn-related injury. It is vital to include epilepsy when calculating neurologic disability because it is preventable in those who are treatment naive as they respond well to antiepileptic drugs. Mandatory inclusion of "Axis 5" from the 2001 ILAE report<sup>3</sup> in the diagnosis of all patients with epilepsy may be a beginning.

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1. Das A, Botticello AL, Wylie GR, Radhakrishnan K. Neurologic disability: a hidden epidemic for India. *Neurology* 2012;79:2146–2147.
2. Ray B, Bhattacharya S, Kundu T, Saha S, Das S. Epidemiology of epilepsy: Indian perspective. *J Indian Med Assoc* 2002;100:322–326.
3. Meyer AC, Dua T, Ma J, Saxena S, Birbeck G. Global disparities in the epilepsy treatment gap: a systematic review. *Bull World Health Organ* 2010;88:260–266.
4. Jerome E Jr. A proposed diagnostic scheme for people with epileptic seizures: report of the ILAE Task Force on classification and terminology epilepsy. *ILAE Commission Report* 2001;42:796–803.

#### IMPAIRMENT OF JCV-SPECIFIC T-CELL RESPONSE BY CORTICOTHERAPY: EFFECT ON PML-IRIS MANAGEMENT?

**Hamid Zahednasab, Tehr, Iran:** Antoniol et al.<sup>1</sup> described the impairment of JC virus (JCV)–specific T-cell response by corticosteroid therapy. The authors did not indicate if patients with relapsing-remitting multiple sclerosis (RRMS) were in relapse or remission stage of the disease. Sotelo et al.<sup>2</sup> showed that the viral

load of varicella-zoster virus (VZV) is higher in patients with MS at relapse phase than those in remission. The status of the disease course in all patients with MS should be determined before sampling.

Four out of the 15 patients with MS with relapse were on interferon (IFN)- $\beta$  treatment. It has been shown that the administration of IFN- $\beta$  can lead to the reduction of JCV genome<sup>3</sup> and may result in a false-negative due to decreasing the JCV titer and T-cell response. Thus, patients taking IFN- $\beta$  should be excluded from this study.

In addition, we would not have included clinically isolated syndrome (CIS) in this study cohort. Approximately 80% of patients with CIS develop MS, while the rest do not.<sup>4</sup> Patients with CIS should not be considered for evaluation of JCV-specific T-cell response under corticosteroid therapy.

**Author Response: Renaud A. Du Pasquier, Mathieu Canales, Myriam Schlupe, Lausanne, Switzerland:**

We thank Mr. Zahednasab for his interest in our article. As we explained in the Methods, we enrolled only patients with MS who had a relapse severe enough to warrant 3 days of IV corticosteroids followed by tapering oral prednisone. The mean delay between the onset of symptoms and steroid treatment was 11.6 days (range 0–54 days). Concerning VZV and MS, the paper of Sotelo et al. has been challenged.<sup>5</sup> In addition, VZV is not JCV so it is difficult to draw any conclusions from this comparison.

Regarding IFN- $\beta$ , as we mentioned: “If a patient exhibited no T-cell response against a given virus before and after CS, then this patient was not taken into account in our analyses for the given virus and the given assay.” This was the case in 2 of 4 patients on IFN- $\beta$ , who are not part of the JCV-specific cellular immune response part of our article and thus not included into the analysis of corticosteroids effects. Finally, in the patients with CIS, diseases other than MS were carefully ruled out. Currently, 4 of 8 of these patients with CIS have converted to definite MS, confirming that their inclusion was appropriate.

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1. Antoniol C, Jilek S, Schlupe M, et al. Impairment of JCV-specific T-cell response by corticotherapy: effect on PML-IRIS management? *Neurology* 2012;79:2258–2264.
2. Sotelo J, Martinez-Palomo A, Ordonez G, et al. Varicella zoster virus in cerebrospinal fluid at relapses of multiple sclerosis. *Ann Neurol* 2008;63:303–311.
3. Delbue S, Guerini FR, Mancuso R, et al. JC virus viremia in interferon-beta-treated and untreated Italian multiple sclerosis patients and healthy controls. *J Neurovirol* 2007; 13:73–77.
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5. Burgoon MP, Cohrs RJ, Bennett JL, et al. Varicella zoster virus is not a disease-relevant antigen in multiple sclerosis. *Ann Neurol* 2009;65:474–479.

## CORRECTIONS

### Randomized controlled trial of trigeminal nerve stimulation for drug-resistant epilepsy

In the article “Randomized controlled trial of trigeminal nerve stimulation for drug-resistant epilepsy” (*Neurology*<sup>®</sup> 2013;80:786–791) by DeGiorgio et al., two corrections are needed. The first is in the abstract, where the confidence interval should read “Subjects in the treatment group were more likely to respond than patients randomized to control (odds ratio 1.73, confidence interval 0.59–5.1).” The second correction is in the level of evidence statement. Although there was improvement within the active treatment group alone, there was no significant difference in effect between the treatment and control groups. The study was insufficiently powered to exclude an important difference. Therefore, the level of evidence statement should read “Because of a lack of statistical precision, this Class II study provides insufficient evidence to determine the efficacy of trigeminal nerve stimulation in patients with DRE.” The editors regret the error and the misstatement.

### WriteClick: Do acute phase markers explain body temperature and brain temperature after ischemic stroke?

In the WriteClick Author Response “Do acute phase markers explain body temperature and brain temperature after ischemic stroke?” by J.M. Wardlaw et al. (*Neurology*<sup>®</sup> 2013;80:778), there is an error in one of the author affiliations. It should read Bartosz Karaszewski, Gdansk. The authors regret the error.

Author disclosures are available upon request ([journal@neurology.org](mailto:journal@neurology.org)).

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## Impairment of JCV-specific T-cell response by corticotherapy: Effect on PML-IRIS management?

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