

CORRESPONDENCE



Deep-Brain Stimulation for Parkinson's Disease

TO THE EDITOR: In their study of two targets for deep-brain stimulation, Follett et al. (June 3 issue)¹ report similar improvement in motor function and quality of life at 2 years among patients receiving pallidal stimulation and those receiving subthalamic stimulation. They observed between-group differences in medication changes and in two measures of neurocognitive function and mood and proposed the consideration of nonmotor factors in target selection, as previously suggested in nonrandomized comparative studies.^{2,3}

However, we missed a multivariate analysis to identify subgroups of patients for whom one approach or the other might be more advantageous. Data on the influence of age, dyskinesia threshold dose,^{2,3} cognitive or mood status, and non-motor fluctuations⁴ could help clinicians individualize selection of the optimal target. Another pertinent factor may be body weight, which was not mentioned in the article, since weight gain has been reported consistently after subthalamic stimulation but to a lesser extent after pallidal stimulation. Because weight gain in patients who have undergone subthalamic stimulation may be partly related to diffusion of the electric current to the hypothalamus,⁵ data on body weight would have not only clinical but also scientific relevance.

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No potential conflict of interest relevant to this letter was reported.

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2. Minguez-Castellanos A, Escamilla-Sevilla F, Katati MJ, et al. Different patterns of medication change after subthalamic or pallidal stimulation for Parkinson's disease: target-related effect or selection bias? *J Neurol Neurosurg Psychiatry* 2005;76:34-9.

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TO THE EDITOR: Follett et al. report that patients with Parkinson's disease gained similar improvement in motor function at 24 months after either pallidal or subthalamic stimulation, whereas changes in nonmotor functions differed between the two groups. The authors suggest that non-motor factors should be considered in the selection of a stimulation target. However, the between-group differences in changes in nonmotor functions, such as the level of depression, may not completely result from the difference in stimulation target; the intergroup difference in dopaminergic drug regimen should not be ignored. As compared with patients undergoing pallidal stimulation, patients undergoing subthalamic

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stimulation took a lower dose of levodopa equivalents, which may have independently led to a worsening of depression. Moreover, pramipexole, a dopaminergic agent with direct antidepressant effect,¹ was not shown to be controlled between the two groups and might have further confounded the results. Since little evidence exists that deep-brain stimulation alone can improve non-motor symptoms,² it would be necessary to clarify whether the different levels of depression were modulated by the different doses or kinds of dopaminergic medications.

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No potential conflict of interest relevant to this letter was reported.

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THE AUTHORS REPLY: We agree with Escamilla-Sevilla and Minguez-Castellanos that multivariate analyses of the data would help to identify which target for deep-brain stimulation may be more appropriate for subgroups of patients on the basis of characteristics such as age, predominant symptoms of Parkinson's disease, or medication dose. The scope of our report was to examine the primary outcome, motor function, at 2 years in the two target groups. We do plan to undertake additional analyses to address questions related to which patients may benefit more

from one target than the other. However, our study was not statistically powered for these additional analyses, so any findings will need to be interpreted cautiously.

We further agree that the effect of stimulation on body weight is an important ancillary outcome of this intervention. However, data on this result were not collected in the trial.

Hou et al. point out that the differences in nonmotor function, such as depression, may be related to changes in the use of levodopa after deep-brain stimulation rather than to the stimulation target. We agree that depression may be affected by medication changes, independent of stimulation. The data on depression and deep-brain stimulation have been somewhat mixed, and studies have not attempted to separate out the independent effects of stimulation and medication on outcome. As we point out in an earlier article,¹ there are data suggesting that medication withdrawal after surgery may not be desirable in all patients, since it may exacerbate nonmotor symptoms. We collected data on all medications received by patients in our trial, and we will be able to examine this issue in more detail with additional analyses.

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Since publication of their article, the authors report no further potential conflict of interest.

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Variants of *DENND1B* Associated with Asthma in Children

TO THE EDITOR: Through their genomewide association study of children with asthma, Sleiman and colleagues (Jan. 7 issue)¹ report that a locus containing *DENND1B* on chromosome 1q31.3 is associated with susceptibility to asthma in children. In support of this claim, the authors state that *DENND1B* encodes a protein that interacts with the tumor necrosis factor (TNF) α receptor

and represses inflammatory-cell TNF-receptor signaling. We are unaware of any published data supporting these statements. Rather, the TNF receptor does bind the DENN (differentially expressed in normal and neoplastic cells) domain-containing protein DENN/MADD (mitogen-activated protein [MAP] kinase-activating death) (a product of locus 11p11.2). This interaction, which