Illness Severity and Depression in Multiple Sclerosis

TO THE EDITOR: We read with great interest the recent article by Lydia Chwastiak, M.D., M.P.H., and colleagues (1), who should be commended for their efforts to assess illness severity and psychiatric symptoms in a community sample of patients with multiple sclerosis; however, methodological concerns make interpretation of their findings difficult.

Our primary concern involves the use of a self-report version of the Expanded Disability Status Scale as a measure of illness severity in multiple sclerosis. The physician-completed Expanded Disability Status Scale has been criticized for its psychometric properties and inadequate sensitivity to multiple sclerosis-related changes (2). Measures such as the Multiple Sclerosis Functional Composite, developed by a special task force of the National Multiple Sclerosis Society, have demonstrated reliability, validity, and sensitivity to multiple sclerosis-related change (3). It may be useful to consider use of more psychometrically sound measures of multiple sclerosis illness severity in future studies.

Another concern we have is the use of the Center for Epidemiologic Studies Depression Scale (CES-D Scale) (4) to measure depressive symptoms in a multiple sclerosis population, as it assesses somatic symptoms common to both depression and the chronic neurological illness. In general, the assessment of depression in medical illnesses is complicated for just such symptom overlap. Furthermore, the authors' definition of groups based on CES-D Scale scores makes an etiological assumption regarding symptoms that may not be true.

The authors discussed use of two different cutoff scores—16 and 21—to identify clinically significant depressive symptoms but used the more liberal of the two in their primary analysis. However, it is possible to obtain a CES-D Scale score of 12 based on potentially multiple sclerosis-related symptoms alone. Dr. Chwastiak and colleagues addressed the issue of symptom overlap by eliminating somatic CES-D Scale items in one of their analyses. Unfortunately, the authors did not present readers with a table of unadjusted means to allow meaningful comparison of patients' scores on the full CES-D Scale vis-à-vis the scores on the modified CES-D Scale.

These limitations aside, Dr. Chwastiak and her colleagues made a commendable effort to determine the association of depressive symptoms with the course of multiple sclerosis. We agree wholeheartedly with the authors' recommendation for awareness and assessment of depression in this population, as treatment has been shown to be quite effective.

References

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Dr. Chwastiak and Colleagues Reply

TO THE EDITOR: We greatly appreciate the interest in our article assessing depressive symptoms and illness severity in persons with multiple sclerosis. We agree that new measures of disease severity and disease-specific disability, such as the Multiple Sclerosis Functional Composite, are quite promising and will be important additions for future multiple sclerosis outcomes research. A major limitation of the Expanded Disability Status Scale is the bias toward locomotor function, and newer instruments attempt to capture important realms of cognition and arm and hand function. We chose the Expanded Disability Status Scale for our study, however, for two reasons. First, the Expanded Disability Status Scale is still used as the primary outcome for disability in most multiple sclerosis clinical trials. Second, the Multiple Sclerosis Functional Composite must be administered by a technician, as it includes a timed walk test, a nine-hole peg test, and the paced auditory serial addition test. This makes it unsuitable as a self-report survey instrument that is mailed to a large sample of subjects, as was required by the design of our study.

Mr. Butt and Dr. Crawford also recognize that there is always a risk of overestimating the prevalence of depression in medically ill patients, given the extent of symptom overlap. We maintain, however, that the strength of the association between the Expanded Disability Status Scale category and depressive symptom severity is not due solely to symptoms that might be better explained by multiple sclerosis. We presented a sensitivity analysis of a "modified" CES-D Scale score (one with the four somatic items removed), which revealed that the group with minimal multiple sclerosis illness severity retained significantly lower mean scores than persons with more severe multiple sclerosis. Evaluation of the unadjusted scores of both the CES-D Scale and the modified CES-D Scale across Expanded Disability Status Scale categories demonstrate that the nonsomatic symptoms of depression increase with increasing Expanded Disability Status Scale categories. Mean scores on the full CES-D Scale increased from 11.8 (SD=10.5) in the 164 subjects with minimal multiple sclerosis to 17.0 (SD=11.2) in the 342 subjects with intermediate disease to 17.5 (SD=10.6) in the 208 subjects with advanced disease. Similarly, mean scores on the modified CES-D Scale were 8.3 (SD=8.7) for the group with minimal disease, 11.6 (SD=9.2) for those with intermediate disease, and 12.0 (SD=9.5) for those with advanced multiple sclerosis.

Moreover, other unpublished results further support our conclusion. A multivariate logistic regression analysis was used to identify factors significantly associated with a CES-D Scale score of 21 and higher. These results were quite similar to the published results of the model predicting a CES-D Scale