Assessing Neuropsychiatric Disturbances Associated With Post-Stroke Aphasia

To the Editor: The neurovascular anatomy of language and neuropsychiatric function suggests that post-stroke aphasia and neuropsychiatric disturbances are likely to co-occur. A limited literature describes the post-stroke aphasias and depression,[1] but the relationships between language disorders and the broader range of neuropsychiatric disturbances experienced by stroke survivors remain understudied. This appears to be attributable, in part, to the limitations of patient-informed neuropsychiatric assessment of persons with aphasia.[1] Similar to the approach undertaken in the study of the neuropsychiatric concomitants to primary progressive aphasia,[2] informant-based neuropsychiatric assessment offers a possible solution to this problem. The Neuropsychiatric Inventory–Nursing Home version (NPI-NH)[3] has not been used to study neuropsychiatric symptoms associated with post-stroke aphasia or its functional correlates. We present here a case illustrating the feasibility of using this measure for these purposes.

Case Report

A 54-year-old, right-handed woman presented with chronic aphasia (presently anomic), produced by a dominant-hemisphere stroke 64 months earlier. She had mild residual right hemiparesis and mild dysarthria. Her Western Aphasia Battery–Revised (WAB–R)[4] Aphasia Quotient was 83.8, reflecting mild aphasia. The patient's husband was interviewed about her neuropsychiatric status and communication effectiveness by use of the NPI–NH and the Functional Outcome Questionnaire for Aphasia (FOQ–A),[5] respectively. The NPI–NH total score was 6 and the Occupational Disruption (OD) score was 1. The Depression and Euphoria/Elation domain scores both were 1, and their OD scores were both 0. The Disinhibition domain score was 4, and the OD score was 1. Positive responses to items in the Depression and Elation/Euphoria reflected the patient's mild chronic pathological laughing and crying, in which laughing predominated. The FOQ–A total score was 2.84 (Z-score = –1.25), reflecting below-average basic verbal and functional response skills. The informant indicated that the NPI–NH usefully captured the patient's neuropsychiatric problems. In particular, he observed that it identified disinhibition, a problem not considered by previous healthcare providers and that was adversely affecting the patient's communication effectiveness.

Discussion

Traditional aphasia research and practice focus narrowly on language assessment and treatment, and regard the evaluation and treatment of neuropsychiatric disturbances as the province of mental health clinicians. This perspective, as well as the limitations of patient-based neuropsychiatric assessment,[1] offers at least a partial explanation for these practice and research patterns. However, aphasia and neuropsychiatric disturbances independently and adversely affect stroke outcomes and functional status.[1] Their co-occurrence may further compromise post-stroke disability. Accordingly, there is a clear need for further study and clinical consideration of the co-occurrence of aphasia and neuropsychiatric disturbances. Use of the NPI–NH as an assessment for post-stroke, aphasia-associated neuropsychiatric disturbances may allow progress toward those ends. This informant-based measure yields quantitative findings that complement patient interview, observation, and examination. As in our patient, the NPI–NH identifies functionally-relevant stroke sequelae in a manner that is acceptable to patients and their caregivers. Data yielded by the NPI–NH permit study of the relationships between post-stroke aphasia, neuropsychiatric disturbances, communication effectiveness, and disability. Further study of the NPI–NH for these purposes in this population is warranted.

Kimberly L. Frey, M.S., CCC-SLP
Jody K. Newman, M.A., CCC-SLP
David B. Arciniegas, M.D.
C. Alan Anderson, M.D.
Gail Ramsberger, Sc.D., CCC
Neurobehavioral Disorders Program
Dept. of Psychiatry
Behavioral Neurology Section
University of Colorado School of Medicine
Aurora, CO
Neurology Service
Denver Veterans Affairs Medical Center Denver, CO
Speech Language and Hearing Sciences
University of Colorado, Boulder, CO
Correspondence: Kimberly L. Frey, M.S., CCC-SLP; e-mail: Kim.Frey@UCDenver.edu

References

1. Robinson G, Shallice T, Cipolotti L: Dynamic aphasia in progressive supranuclear palsy: a deficit in generating a fluent sequence of novel thought. Neuropsychologia 2006; 44:1344–1360
2. Rohrer JD, Warren JD: Phenomenology and anatomy of abnormal behaviours in primary progressive aphasia. J Neurol Sci 2010; 293:35–38
3. Wood S, Cummings JL, Hsu MA, et al: The use of The Neuropsychiatric Inventory in nursing home residents: characterization and measurement. Am J Geriatr Psychiatry 2000; 8:75–83
4. Kertesz A (Ed.): Western Aphasia Battery–Revised. San Antonio, TX, Pearson, 2007
5. Glueckauf RL, Blonder LX, Ecklund-Johnson E, et al: Functional Outcome Questionnaire for Aphasia: overview and preliminary psychometric evaluation. NeuroRehabilitation 2003; 18:281–290