Title: Primary Progressive Aphasia in a Bilingual Woman

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Objective: To report neurolinguistic features of a Chinese- and English-speaking woman with primary progressive aphasia (PPA).

Background: Aphasia in bilingual individuals provides an interesting context in which to investigate the cerebral representation of language. Most knowledge of this area is based on study of individuals who have had a stroke; neurodegenerative disease permits observation of this syndrome as progressive language impairment develops. We present a case of PPA in a bilingual patient.

Design/Methods: Case study of a highly educated, 75-year old, right-handed woman who is fluent in her native Chinese (Shanghai dialect) and English.

Results: Language disturbance has progressed over five years. The first symptom was word-finding impairment, followed by articulatory deficits and paraphasic errors. There has been no memory loss, personality change, impaired recognition, or visuospatial deficit; mild depression has been improved by antidepressant medication. Brain magnetic resonance imaging is unremarkable for her age, but single photon emission computed tomography shows subtle left temporal and parietal hypometabolism. Routine laboratory studies and the elemental neurologic examination are unremarkable. Neurobehavioral testing shows fluent speech, normal auditory comprehension, impaired repetition, moderate anomia, and literal paraphasias. Reading and writing are preserved, and there is no amnesia, apraxia, agnosia, acalculia, right-left disorientation, visuospatial disturbance, or executive dysfunction. Testing with the Boston Diagnostic Aphasia Examination in Chinese and English reveals that, although Chinese is more affected than English, the pattern of linguistic characteristics is remarkably similar.

Conclusions/Relevance: To our knowledge, this is the first case of PPA reported in a bilingual individual. The current profile of linguistic deficits resembles conduction aphasia, and likely reflects neuronal degeneration in left temporal and parietal regions. English is better preserved than Chinese, perhaps because English has been the preferred language for many years. Qualitatively, aphasia is nearly identical in the two languages, suggesting that they are represented in closely related cortical areas.