

## Semantic Dementia in Multilingual Patients

*SIR:* Semantic dementia (SD) is a frontotemporal lobar degeneration with progressively impaired word comprehension.<sup>1</sup> Semantic dementia seems to progressively damage the semantic system with eventual loss of semantic memory for objects as well as words. The pattern of language loss in multilingual persons can yield information about the separateness of the semantic systems in each language.

### Case Reports

*Case 1.* A 71-year-old man experienced a slow, progressive loss of his ability to use and understand Spanish and German. The patient was a language teacher who had been fluent in Spanish and used it daily in his everyday work. He had normal mental status and neurological examinations except for naming and recognizing famous faces. Confrontational naming in English was decreased, and many words such as cuff, lapel, or eyelashes had no meaning to him. The patient had great difficulty understanding even common nouns in Spanish, and he was no longer able to understand any German words. On an aphasia battery, word comprehension was moderately impaired in English and severely impaired in Spanish and German. Words that were comprehended in Spanish or German were not consistently comprehended in English. His magnetic resonance imaging (MRI) studies showed anterior temporal atrophy, left greater than right.

*Case 2.* A 66-year-old man had a 2-year history of progressive loss of

the meaning of words and inability to retrieve words. Although Spanish was his first language, he spoke English at work and knew some Polish as well. His examination was intact except for naming and recognizing famous faces. Confrontational naming in Spanish was impaired, and he could not point to a tie, cuff, buckle, or other common items in the room. He could not name pictures of items and made some semantic errors (e.g., "zero" for "circle"). His performance was worse in English than in Spanish, and his Polish was lost. If he comprehended a word in one language, he did not necessarily comprehend it in the other language. His MRI scan showed left anterior temporal atrophy.

### Comment

In two multilingual patients with SD, semantic anomia was progressively more impaired in their second and third languages compared to their primary languages. Words named and comprehended in one language were not consistently named and comprehended in other languages that they knew. These findings are compatible with separate lexical semantic systems for each language.

Other data support the presence of multiple lexical semantic systems. Many bilingual aphasics recover primarily in one language, and there are reports of dissociations of languages with focal lesions.<sup>2,3</sup> In addition, there are specific language lexicons including modality specific (spoken or written), grammar specific (nouns or verbs), and even category specific (e.g., animate versus inanimate).<sup>4,5</sup>

In conclusion, these patients

could differentially access word meaning from separate languages. Compared to the first language, subsequent languages are not as strongly conceptually based, and their semantic representations may be more vulnerable to brain disease. These patients suggest impairment of separate semantic systems for different languages in SD.

MARIO F. MENDEZ, M.D., PH.D.

SAMIRA SAGHAFI, M.D.

DAVID G. CLARK, M.D.

Neurobehavior Unit, VA  
Greater Los Angeles Health-  
care, University of California at  
Los Angeles, CA

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## Treatment of Bruxism in Huntington's Disease With Botulinum Toxin

*SIR:* Tan et al.<sup>1</sup> previously reported successful treatment of three patients with bruxism associated with Huntington's disease (HD) using

botulinum toxin-A (BTA). We are reporting effective treatment in another similar case.

#### Case Report

A 50-year-old woman was admitted to our care with a diagnosis of HD, originally diagnosed at age 34. She complained of teeth grinding and severe jaw pain. We observed audible grinding of her teeth 100% of the time while awake.

Prescribed medications included paroxetine, haloperidol, and tamoxifen for previously diagnosed breast carcinoma. Haloperidol was started 2 months earlier for chorea, bruxism, and agitation. Chorea decreased at a dose of 2 mg/day, but bruxism did not improve. Bruxism worsened in spite of a dosage increase to 4 mg/day. Trials of baclofen and lorazepam did not improve bruxism.

We attempted treatment with BTA injections. First, we used BTA in a concentration of 5 units per 0.1 ml. Fifty units were divided among three injection sites in each masseter muscle for a total of 100 units.

We observed an immediate decrease in bruxism, with continued improvement over the first 3 days after treatment. Severe jaw pain also decreased after the first treatment and then resolved completely. Teeth grinding declined from 100% of time while awake to less than once in 10 minutes after 1 week, and then to less than once in 30 minutes 1 month after this treatment.

The second treatment was 1 month after the first. Bruxism had increased slightly near the end of this interval. A BTA concentration of 10 units per 0.1 ml was used for the second and for subsequent treatments. She has received a total of six treatments over 18 months.

For treatments two through six, both masseter and temporalis muscles were bilaterally injected. This

combination gave more benefit than the masseter-only injections. All injections were administered with EMG guidance. The total BTA dose for each treatment was 100 units.

She continues to have an excellent result that variably lasts from 3 to 6 months. She remains free of jaw pain, and bruxism is minimal.

She has reported no adverse effects from this treatment, and we have observed none. Specifically, she has had no difficulty with mastication or deglutition. A swallowing evaluation done during this course of treatment was normal.

#### Comment

Bruxism involves jaw clenching and grinding of the teeth, commonly causes myofascial pain, and is often resistant to treatment. Other reports describe successful treatment with BTA of bruxism associated with traumatic brain injury.<sup>2-4</sup>

Bruxism has been reported in patients with HD,<sup>1,5</sup> but it does not appear to be a common symptom. When present, it can be quite distressing. BTA injection is a therapeutic option. We recommend that BTA injections for this indication be given with EMG guidance. Our experience in treating our patient, and that previously reported by Tan et al.<sup>1</sup> suggest that botulinum toxin type A is worthy of consideration for treatment of persons suffering from severe bruxism associated with Huntington's disease.

MAUREEN C. NASH, M.D.

RICHARD B. FERRELL, M.D.

MARK A. LOMBARDO, M.D.

ROBERT B. WILLIAMS, PH.D.

Colby Center for Psychiatry,  
Adirondack Medical Center,  
Saranac Lake, NY (M.C.N.);  
Dartmouth Medical School,  
Lebanon, NH, and Neuropsychiatry Service, New Hampshire Hospital, Concord, NH (R.B.F.); Concord Neurological Associates, Concord, NH

(M.A.L.); Neuropsychiatry Service, New Hampshire Hospital, Concord, NH (R.B.W.)

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### Charles Bonnet Syndrome and Panic Disorder

*SIR:* Charles Bonnet syndrome (CBS) refers to complex visual hallucinations in psychologically normal people.<sup>1</sup> Most individuals with CBS have decreased visual acuity.<sup>2</sup> We recently examined a man who developed visual hallucinations consistent with CBS. The nature of his hallucinations changed markedly after he developed panic disorder, which caused him to seek psychiatric consultation.

#### Case Report

Mr. I was diagnosed with pigmentary retinal dystrophy early in life. At age 30, he lost vision of his left eye due to a traumatic injury. At age 49, when the visual acuity of his right eye was at the level of *sensus luminum*, he began to report seeing vivid images, including familiar or unfamiliar human faces, downtown scenes in which many people