Vagal and Hypoglossal Bell's Palsy

ABSTRACT

A 7-year-old boy was referred because of a sudden change to nasal speech, dysarthria for words with explosive consonants in speech, and nasal regurgitation of fluids. The symptoms arose over 1 week following a capricious episode of acute asthmatic bronchitis. Physical and neurologic examinations were normal except for a left deviation of the uvula, accompanied by a "curtain" movement of the posterior pharyngeal wall against the contralateral side, and for a left deviation of the protruded tongue. No vascular, traumatic, infectious, neoplastic, or neurologic causes could be identified. No therapy was administered. Full recovery occurred 4 months later.

The diagnosis was idiopathic vagal and right hypoglossal nerve palsy (Bell's palsy). (J Child Neurol 2000;15:130-132)

 transient unilateral hypoglossal nerve palsy (Bell's palsy of the tongue) is very rare. Since its association with a transient unilateral palsy of the vagus nerve has never been described, we are reporting a combination of these two palsies seen in a 7-year-old boy.

Case Report

The patient, a 7-year-old boy, awoke one morning with a changed voice (nasal speech) and dysarthria for words with explosive consonants in speech. At breakfast, nasal regurgitation of fluids was noted. The symptoms had occurred over the previous week following an episode of acute asthmatic bronchitis, which was treated with antibiotics, corticosteroids, and β2-stimulants.

A few days after symptom onset, the child was admitted to our Pediatric Department of Siena University. Physical examination was otherwise normal, except for left deviation of the uvula and a "curtain" movement of the posterior pharyngeal wall against the contralateral side.

Figure 1. Palsy of the right vagus nerve. Deviation of the uvula to the paralyzed side and "curtain" movement of the posterior pharyngeal wall against the contralateral side.

Figure 2. Palsy of the right hypoglossal nerve. Deviation of the protruded tongue to the paralyzed side.
Figure 3. Cranial magnetic resonance imaging. Sinusitis of the A, maxillary, B, sphenoid, and C, ethmoid, sinuses (opacities indicated by arrows).

Discussion
Except for paresis of the facial nerve, other transient idiopathic neuropathies of the cranial nerves are unusual. Bell's palsy of the tongue (ie, an idiopathic palsy of the hypoglossal nerve) has been described. However, the association of hypoglossal palsy with palsy of other nerves has never been described, except for the case observed by Saito and Onuma in 1991 of an isolated hypoglossal nerve palsy concomitant with Horner's syndrome, both with a benign course.

We report a 7-year-old boy with a transient, unilateral, isolated vagal and right hypoglossal nerve palsy. The vagal palsy was suggested by the clinical symptoms of the change in voice to nasal speech, dysarthria, and nasal regurgitation of fluids, in addition to the very suggestive neurologic signs of the uvula deviated toward the paralyzed side and a "curtain" movement of the posterior pharyngeal wall against the contralateral side. The hypoglossal nerve palsy was clinically asymptomatic and probably would have been misdiagnosed without an accurate neurologic examination that revealed a slight deviation of the protruded tongue toward the paralyzed side.

Except for the symptoms described, the child appeared to be in very good health and novascular, traumatic, infectious, neoplasmic, or neurologic causes for these palsies could be identified. MRI of the brain and neck was normal, except for opacity of the maxillary, sphenoid, and ethmoid sinuses suggestive of sinusitis. Since sinusitis is commonly asymptomatic in children, its association with these nerve palsies is likely to be casual. In fact, no anatomic relationship exists between the nerves involved and the above sinuses, and no intracranial complications consequent to sinusitis could be ascertained.

Reasonably, the diagnosis was idiopathic right vagal and hypoglossal nerve palsy (Bell's palsy). We think it is important to keep this association in mind in order to avoid unnecessary invasive procedures in any further similar cases.

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References
Venlafaxine in Children, Adolescents, and Young Adults With Autism Spectrum Disorders: An Open Retrospective Clinical Report

ABSTRACT

Autism is a neurodevelopmental disorder characterized by disturbance in social interactions, communication and language impairments, narrow restricted interests, repetitive behaviors, inattention, and hyperactivity. While selective serotonin reuptake inhibitors have demonstrated efficacy in treating core symptoms of autism, norepinephrine reuptake inhibitors have demonstrated efficacy in symptoms of attention-deficit hyperactivity disorder (ADHD). An open, retrospective clinical study with venlafaxine evaluated its effect on core symptoms of autism as well as associated features of ADHD. Ten consecutive subjects meeting Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV), criteria for an autism spectrum disorder were treated with venlafaxine, initiated at 12.5 mg per day and adjusted on a flexible basis. Six of 10 completers were judged to be sustained treatment responders, by scoring 1 (very much improved) or 2 (much improved) on the Clinical Global Impressions improvement scale. Venlafaxine was effective in low dosages (mean, 24.37 mg/day; range, 6.25 to 50 mg/day) and was well tolerated. Improvement was noted in repetitive behaviors and restricted interests, social deficits, communication and language function, inattention, and hyperactivity. Controlled treatment trials with venlafaxine are warranted in autism spectrum disorders. (J Child Neurol 2000;15:132-135).

Results

Nine male patients and one female patient were included in the report; eight were children or adolescents and two were adults.

Venlafaxine exhibits potent inhibition of both serotonin and norepinephrine reuptake, and to a lesser extent, dopamine reuptake.11 Existing preliminary data suggest that venlafaxine could be effective in treating symptoms of obsessive-compulsive disorder,12,13 attention-deficit hyperactivity disorder (ADHD),14 and social phobia,10 symptom clusters that overlap with autism spectrum disorders.

The selective serotonin reuptake inhibitors have been shown to be effective in targeting core autistic symptoms, and norepinephrine reuptake inhibitors might reduce associated features such as hyperactivity. This study examines whether venlafaxine, which has serotonin and norepinephrine reuptake inhibition effects without histaminergic, muscarinic, or α-adrenergic activity, holds promise in treating autism spectrum disorders.

Method

This open, retrospective study examined treatment response of venlafaxine in the first 10 children, adolescents, and young adults with autism spectrum disorders treated with venlafaxine, and data are presented in a descriptive fashion. The first 10 patients (8 children or adolescents and 2 young adults) between the ages of 3 and 21 years who met Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV) criteria for pervasive developmental disorders including autism, Asperger's syndrome, and pervasive developmental disorders not otherwise specified and who were treated with venlafaxine, are included.

All patients were assessed by a board-certified psychiatrist (E.H.) with extensive experience in treating children, adolescents, and adults with autism spectrum disorders, and recruited from the author's office-based practice. Current DSM-IV diagnoses were determined on the basis of patient and parent interview and all other available clinical data, including neuropsychologic testing, individualized educational plans, and teacher reports. Exclusion criteria included the presence of a significant medical illness such as hypertension or seizure disorder. Psychiatric exclusion criteria included bipolar illness or psychotic disorders.

Improvement in the severity of autistic spectrum disorders symptoms was assessed with the Clinical Global Impressions improvement scale, a clinician-rated instrument that involves comparing the patient's current condition to that at baseline, to determine how much the patient has changed with clinical treatment. Improvement scores were 1 (very much improved), 2 (much improved), 3 (minimally improved), 4 (no change), 5 (minimally worse), 6 (much worse), and 7 (very much worse). Responders were those who obtained a Clinical Global Impressions improvement score of 1 to 2 (very much to much improved).

Patients were started on an initial dose of 12.5 mg of venlafaxine after breakfast to avoid potential side effects. Doses were adjusted on a flexible basis to minimize side effects and maximize improvement. At each visit, patients and their parents were asked about potential side effects that are most common to venlafaxine. Data collected on all patients who enrolled in this trial were included in the report.


