Foreign Accent Syndrome presenting as Conversion Disorder: A rare presentation

Abhishek Reddy, MD; Richard C. Shelton, MD; Robert Savage, PhD; Badari Birur, MD

1 PGY3 Psychiatry Resident, 2 Professor of Psychiatry, 3 Professor of Psychology, 4 Assistant Professor, Department of Psychiatry and Behavioral Neurobiology, University of Alabama, Birmingham, AL, USA

Foreign accent syndrome (FAS) is a rare disorder in the production of speech with a change in articulation and prosody that is perceived by listeners to have a different accent, hence the name foreign accent syndrome. FAS incidents have been mostly reported secondary to traumatic brain injury or stroke affecting the speech producing regions of the brain. Very few reported cases of FAS have been associated with psychiatric conditions. We report a case of FAS with comorbid transient stuttering presenting as conversion disorder in a 45-year-old right-handed monolingual female with an American English accent who presented to the emergency room with a British cockney or Australian accent. The onset of the syndrome occurred after the dissolution of her second marriage. Repeated comprehensive assessments including physical and neurological examinations, laboratory tests, neuromaging, and electroencephalogram were all normal. Personality testing and two independent neuropsychological and psychiatric evaluations support a psychiatric etiology, namely FAS secondary to conversion disorder.

Introduction

Foreign accent syndrome (FAS) is a rare disorder of speech with a change in articulation and prosody [1-3]. Both listeners and the affected speaker perceive the change as being a different, "foreign" accent, hence the name foreign accent syndrome (FAS) [2-4]. Importantly previous case reports have shown that the affected patients may have never resided in the country of origin of the foreign accent [5-7]. The first FAS case in a patient was anecdotally described over a century ago by Marie [8] in 1907; Whitaker coined the term “Foreign Accent Syndrome” in 1982 [4]. Whitaker’s diagnostic criteria included four features a) “the accent is considered by patient, acquaintances and by examiner to sound foreign”; b) “it is unlike the patient’s native dialect before cerebral lesion” c) “it is temporally correlated to central nervous system lesion”; d) “there is no evidence that patient is foreign language speaker”. Later Verhoeven and Marien in 2010 [9] suggested three subtypes of FAS: neurogenic, psychogenic and mixed variant. From 1907-2014 at least 100 cases of FAS syndrome have been published, the majority of which have neurological etiology [10]. The primary etiologies have been organic in nature that involve damage to cortical and subcortical structures of the brain involved in expressive speech and language production, by way of cerebrovascular accidents [11-15], traumatic brain injury [16-18] or left hemisphere lesions [19]. Although rarer, seventeen cases of non-organic FAS have been associated with various psychiatric etiologies including schizophrenia, bipolar disorder, posttraumatic stress disorder and obsessive compulsive disorder. Amongst these seventeen, five cases have had a diagnosis of conversion disorder [3]. In this rare case report, we present a case of functional FAS presenting as a conversion disorder, which was supported by psychiatric, neurological and two independent neuropsychological evaluations.

Case Presentation

The patient is a 45-year-old right-handed monolingual female with an American English accent who presented to a hospital emergency room in 2015 with depression and suicidal ideation due to a reported change in accent. She had an abnormality in articulation and prosody that was perceived by listeners as a British-sounding "cockney" accent. This started after an emotional trigger, the dissolution of her second marriage in 2013 and required psychiatric hospitalization for depression with suicidal ideation. The patient alleged physical attack by a staff member at a psychiatric facility (no record of the incident could be found), after which she had speech abnormalities (stuttering) that remained for about four days. She awoke the next day with a British accent, which persisted thereafter. During recent psychiatric hospitalization for depression at our hospital in July 2015, the patient had her accent varying from American to British to Australian, although the speech was predominantly British sounding. She had varying accent with periods of normal accent. During her previous hospitalizations she was diagnosed with major depressive disorder, conversion disorder, eating disorder not otherwise specified (NOS) and personality disorder NOS. There was no previous history of suicide attempts, psychosis or substance abuse. Family history was negative for psychiatric illness or suicide. Past medical history was positive for hypothyroidism and migraines.

On examination, the patient had fluent speech with intact grammar and British accent (with some unusual Cockney-like phrasing and occasional Australian accent described as tendency to speak in a caricature of a foreign accent rather than accidentally foreign). Her speech had normal volume and rate. There was no break in the train of her thought, though she paraphrased at times. She did not demonstrate ability to imitate other accents. Patient had an occasional stutter, a feature of functional speech disturbance, but was able to complete meaningful sentences. She reported using words that were previously unknown to her, such as “I need to go to the loo”. On a prior interview, her speech prosody was observed to have exaggerated inflections and pauses during re-telling of past events which might be behaviors in keeping with stereotype associated with accent. The patient believed she had problems with her speech and requested a neurological evaluation.

* Corresponding Author, Badari Birur, MD. Assistant Professor, Department of Psychiatry and Behavioral Neurobiology, 1713 6th Avenue South, Center for Psychiatric Medicine, University of Alabama, Birmingham, Birmingham, AL 35210, USA. Tel: 205-975-8544; Fax: 205-975-6509. Email: bbirur@uabmc.edu © 2016 by the Authors | Journal of Nature and Science (JNSCI).
Complete physical, detailed neurological examinations, brain magnetic resonance imaging (MRI), electroencephalogram (EEG), complete blood count (CBC) with differential and comprehensive metabolic panel (CMP) were reported normal and failed to show an organic or neurological process underlying her variable foreign accent. Consistent with diagnostic and statistical manual (DSM)- 5 guidelines, conversion disorder (or functional neurological disorder) calls for the presence of clinical symptoms that are incompatible with recognized neurological or medical conditions (criterion B) and symptoms or deficits not better explained by another medical or mental disorder (criterion C) were thus established by these findings [20].

At the time of discharge, her depression had subsided but her varying accent remained. Patient’s diagnosis on discharge during July 2015 hospitalization was Major depressive disorder, recurrent episode, mild to moderate and Conversion Disorder. She was discharged on clonazepam 2mg at night, Sertraline 150mg daily, Topiramate 150mg twice a day, Gabapentin 300mg three times a day as needed for headaches and trazodone 150mg at night. Migraine is being managed by neurologists and she was last seen at their clinic in November 2015 during which she continued to demonstrate FAS.

Neuropsychological Testing Reports
Comprehensive neuropsychological evaluation was conducted in September 2014 by neuropsychology division affiliated with department of neurology. That evaluation indicated intact cognitive function for age, education and vocational attainment, with a few mild isolated verbal memory and fine motor deficits. There diagnostic impression was of “Foreign accent syndrome (FAS) likely secondary to conversion disorder with significant secondary gain”. During her hospitalization for depression in July 2015 extensive and independent psychiatric evaluations and neuropsychological tests were conducted and similar conclusions were reached. The second neuropsychological evaluation reported “mild to moderate depression, some mild anxiety and tension, and emotional lability, somatic symptoms were elevated and in particular, she indicated current mild fatigue, head pain and subjective cognitive complaints, gastrointestinal symptoms and neurological symptoms were elevated to maximal levels, the somatization scale elevations suggest that (the patient) may express much of her psychological distress in somatic channels”. On interview her speech was self-described as “at first, a sort of little ‘chippy-choppy voice’ that later sounded like a British, or my kids say an Australian accent”. Her speech was notable for nearly inaudible speech with an exaggerated feminine or girlish quality when articulating the “little chippy-choppy voice”, and then switching to a well- articulated proper sounding adult British accent. At times she also slipped into some less proper, more cockney-sounding phrasings. Given the negative neurological findings and her history of eating disorder, conversion disorder was indicated. Further, it was noted that neurological and gastrointestinal symptoms are common comorbidities in somatization syndromes. In summary, two independent neuropsychological evaluations were strongly indicative of FAS presenting as a functional neurological disorder most likely conversion disorder. Lastly, none of the experienced psychiatrists, neuropsychologists or formal test results indicated the likelihood of factitious disorder or malingering, further indicating a valid case of FAS presenting as conversion disorder.

Discussion
In the last century, until July 2016, around 100 cases of FAS have been published, of which only seventeen have involved psychogenic FAS with majority of the remaining being neurogenic. Amongst these seventeen psychogenic FAS cases, 67% of patients were women with a mean age of 48 years (range: 30-74 years) [1-3]. Our patient is a 45 year old female who fits these demographics. Even though the diagnostic features are not well developed, our patient fits most of the criteria per Lee et al [21] as described in the case presentation. Amongst the seventeen cases of psychogenic FAS, only five presented as FAS with conversion disorder. Interestingly these five FAS cases with conversion disorder had varying pre-FAS accents which developed into a new accent (Dutch to French, Japanese to Chinese, American English to Eastern European, English to French/Spanish/Jamaican/Caribbean/ African, American English to Jamaican English and American English to Caribbean English). Three out of these five FAS cases had comorbid speech and language disorders including dysarthria or speech apraxia like symptoms, paragrammatism and initially mute behavior. Similarly our patient had stuttering prior to the onset of FAS. Additionally only a small number of patients in the above seventeen had formal neuropsychological investigations unlike our patient who had two independent neuropsychological evaluations by qualified neuropsychologists [1-3, 22-24]. Our patient had notable variation in her accent from American English to British/cockney, to Australian accent with transient comorbid speech and language disorder, different from the above five FAS cases with conversion disorder [3]. Also our case is among the few cases in which FAS has remained persistent throughout follow up [1-3, 22-24]. It is also interesting to observe that only four patients out of the seventeen, with FAS of psychogenic origin in the past were subjected to formal neuropsychological assessment [1-3, 22, 25]. In two of five [1, 2], the pattern was significant for conversion disorder thus making our case the third to have been diagnosed as FAS with conversion disorder by two independent neuropsychologists over a period of 10 months.

Conclusion
This is a rare presentation of FAS presenting as a conversion disorder. The patient had significant differences in her articulation and prosody with an unusual and variable British (predominant) or Australian type accent, which started secondary to a significant emotional trigger. Neuroimaging and EEG did not reveal any evidence of organic pathology. Personality testing and independent neuropsychological, psychiatric and neurological evaluations support a psychiatric etiology, namely FAS secondary to conversion disorder.

Conflict of Interest
Authors have no conflict of interest to disclose in the preparation of this manuscript.

Statement of Human and Animal Rights
Informed consent was obtained from patient prior to the preparation of this case report.