

Psychogenic Voice changes in First Episode Psychosis

Nur-ul-Ein, MBBS, Michael Garrett, M.D

SUNY Downstate University of Health Sciences in Brooklyn

Case Report

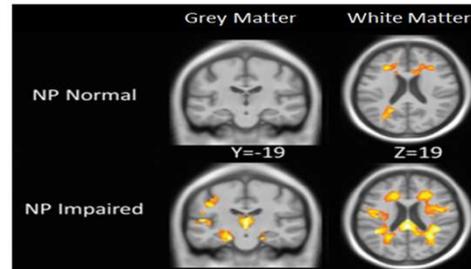
Patient is an unemployed, domiciled Caucasian man in his late 20's with no significant past psychiatric or medical history, initially presented to the psychiatric emergency room after his mother obtained a mental health warrant to have him psychiatrically evaluated. As per mother, the change in voice started recently in mid-august, which was part of the reasons that prompted her to obtain the mental health warrant.

Upon initial interview, patient presented bizarre, smiling inappropriately in session, appeared internally preoccupied, talking in an odd high-pitched voice throughout the session. He maintained was the way his voice always sounded so high pitched. After much exploration, he reported that he noticed a change in his functioning after he graduated law school three years earlier. This was around the same time as his breakup with his girlfriend and multiple unsuccessful attempts to pass the bar exam. He reportedly became more isolative, stopped talking to his friends, had poor sleep, and lost interest in things he once enjoyed. Patient was noticed, during initial contact, to have gender dysphoric delusions with little insight into reasons for admission. Per collateral, he had been stating that he was a transgender Indian, with women's clothing and sanitary pads found in his apartment by family.

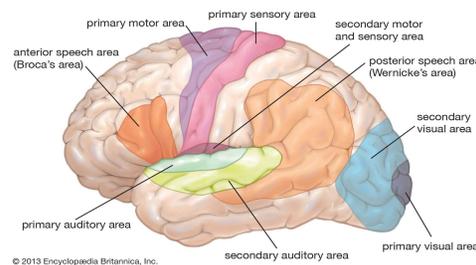
Initially he was guarded and continued to communicate in a high-pitched feminine voice. He mentioned that he thought 'my boss was putting hormones in my food to turn me into a woman'. At that time, he was able to label these thoughts as being 'absurd' and 'dumb'. Throughout his stay, he preferred the use of male pronouns and endorsed gender preoccupied delusions with lessening frequency. Although when questioned regarding the voice, the patient continued to remain adamant that he had no experienced any voice changes.

Work up for potential organic causes of voice changes was completed during the admission. Head CT on admission showed atrophy of brain parenchyma with prominence of the sulci but no active pathology. Patient was evaluated by ENT causes for voice changes; no structural abnormalities or traumatic changes were noted on physical examined no further testing was recommended by ENT during inpatient stay. His TSH was within normal limits, he reported no difficulty swallowing, difficulty breathing or throat pain or dryness.

During longer interviews, his voice would lower in pitch, had a hoarse quality and at times could become inaudible. As his stay progressed, there were brief moments when his voice pitch would change, for it to be classified as masculine, but there was no sustained resolution. Patient preference was to continue attempting on his own to work on the character of his voice; caveat being that patient continued to deny any changes in the character of his voice. Patient's psychotic spectrum symptoms responded well to the oral risperidone with full conversion to long acting injectable paliperidone. He became less socially withdrawn, was noticed to be participating in group activity and relationship with family with resolving paranoia about them. At the end of his stay, that he would not be going through his gender transition and he was 'not sure where that came from'. At that time, he also maintained the fluctuating pitch of voice but reported that the voice did indeed sound bizarre to him and he could hear a 'tapping' sound when he swallowed. Hence, while chronologically the voice changes appeared at time patient was experiencing other positive symptoms of psychosis, the resolution of symptoms was not synchronous.



The picture above shows areas of grey matter and white matter volume loss in individuals with a psychotic disorder. Patients with normal neurophysiological (NP) functioning have only mild changes in white matter (light colors), whereas those with impaired neurophysiological (NP) functioning have widespread changes in grey and white matter.



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Treatment team initiated a combination management regime, with a psychopharmacological prong and psychotherapeutic prong. He responded well to the initiation of an atypical antipsychotic like Risperidone with conversion to long acting injectable in the same class. Patient was initially hesitant to pursue a psychotherapeutic relationship with the treatment team but over the time, with building rapport, he showed good response to brief psychotherapeutic interventions. Patient was adherent with the up titrating of oral risperidone; and after multiple discussions with the treatment team regarding his concerns of long acting injectable; agreed to the conversion to the injectable paliperidone. As his presentation was more significant for negative symptoms, chronologically speaking, of the schizophrenia spectrum; benefits of cognitive behavioral therapy techniques, which would help him develop coping mechanisms, reduce withdrawal from social contact and activity and be more future oriented, were discussed with the patient. While patient's voice changes persisted, he was able to resume certain level of functionality and demonstrate adequate agency regarding his continued care.

Discussion

Given the varied presentations of schizophrenia, it is possible to experience voice changes in the context of psychotic symptoms or presence of a psychogenic disorder. Given the chronology of symptoms presented, it is possible to link the delusional process with the voice changes. Psychogenic voice disorders or psychogenic conversion aphonia/dysphonia (Stemple, Glaze, & Klaben, 2010) are rare.

Psychogenic Voice Disorder occur, in the absence of significantly accountable structural or neurological pathology, with onset and maintenance of the voice difficulty caused by disturbed psychological processes. (Baker, Ben-Tovim, et al. 2007). Psychogenic Voice Disorder are divided into the following categories:

- 1) Psychogenic aphonia
- 2) Puber-phia/ Mutational Falsetto
- 3) Psychogenic Spasmodic Dysphonia
- 4) Childlike/infantile speech in adults
- 5) Immature voice in women.

Given the variety of triggers present in the patient's background, it could be possible to put forwards a hypothesis, that his voice was triggered by patient's gender preoccupied delusions or as a way of de-identifying himself from his previous self whom he saw as a failure. The possibility of external stressors causing the dysphonia is discussed in other case reports; particularly as an interplay with the psychotic process. Previous reports suggest that dissociative symptoms and psychosis exist on a spectrum; being that disassociation is more palpable coping mechanism for the inner turmoil and the floridly psychotic symptoms present when there is complete devolution of the internal state. Studies show that there is at least 5-30% overlap between the two symptomatology's. This would also lead to the consideration that with resolution of the psychotic symptom's patients would experience return of usual voice pattern; interestingly enough one of the cases reported an outcome where the patient would experience the dysphonic symptoms with the resolution of his psychotic state and vice versa.

There exists an established relationship between external stressors and psychogenic voice changes. With the case presented above, several psychosocial stressors were identified; patient being a previously high functioning individual who experienced multiple setbacks in his personal and professional life, with evidence these events being a possible prodromal phase of Schizophrenia. This could have triggered a possible dissociative episode, where to prevent deterioration of his previous self, patient disassociated to cope. This would also help relieve the burden of having to resume his previous capabilities.

While there is limited data to point to an exact association of dysphonic changes and schizophrenia spectrum disorders, there does seem to exist an overlap. It is possible to construct a chronological timeline linking the two in terms of onset but less so regarding resolution. Co-morbid dysphonic disorder with schizophrenia spectrum disorder will worsen the stigmatization of individuals and there still exists a need for further study on association and co-management of both disorders.

References

1. Murphy RA, Hallahan B. Psychosis improved dysphonia. *Case Reports* 2013;2013: bcr2013201531.
2. Siddiqui, Javed & Qureshi, Shazia & Marei, Waseem & Shawosh, Yousef. (2017). Gender dysphoria (transsexualism) and schizophrenia: a case report. *Indian Journal of Mental Health*. 04. 410-413.
3. Lalsa Shilpa P. Psychogenic Voice Disorders. *Glob J Oto 2017*; 5(3): 555663. DOI: 10.19080/GJO.2017.05.555663
4. Deary, Vincent & Miller, Tracy. (2011). Reconsidering the role of psychosocial factors in functional dysphonia. *Current opinion in otolaryngology & head and neck surgery*. 19. 150-4. 10.1097/MOO.0b013e328346494d.
5. American Psychiatric Association: *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. Washington, DC, American Psychiatric Association, 2013
6. Smith, William & Goldhammer, Hilary & Keuroghlian, Alex. (2018). Affirming Gender Identity of Patients With Serious Mental Illness. *Psychiatric Services*. 70. appi.ps.2018002. 10.1176/appi.ps.201800232.
7. Roy, Nelson. (2003). Functional dysphonia. *Current opinion in otolaryngology & head and neck surgery*. 11. 144-8. 10.1097/00020840-200306000-00002.
8. Rajkumar, Ravi. (2014). Gender Identity Disorder and Schizophrenia: Neurodevelopmental Disorders with Common Causal Mechanisms? *Schizophrenia research and treatment*. 2014. 463757. 10.1155/2014/463757.
9. Stusinski, Jaroslaw & Lew-Starowicz, Michal. (2018). Gender dysphoria symptoms in schizophrenia. *Psychiatria Polska*. 52. 1053-1062. 10.12740/PP/80013.