Psychogenic Belching after Motor Vehicle Accident

Alexander Poznanski, MD & Tiffany Prout, MD, Department of Behavioral Health
Henry Ford Health System, Detroit, Michigan

Abstract

Conversion disorder (functional neurological symptom disorder) often occurs after stress or trauma. Belching has been described only sporadically as the presentation of conversion disorder, thus making diagnosis and treatment very challenging. Despite the lack of underlying neurologic illness contributing to the presentation, conversion symptoms including belching can be socially and occupationally impairing for individuals, even in those who do not report distress related to the symptoms, as is often the case. Without proper diagnosis and management, patients may continue to seek neurologic treatment for their symptoms, reducing quality of life while increasing costs and putting patients at risk for unnecessary procedures and harm. This often requires a multidisciplinary team consisting of psychiatrists and neurologists, among others. Psychotherapy remains the mainstay of treatment, though physical/occupational/speech therapy and pharmacotherapy can augment treatment in certain situations. In this poster we will discuss psychogenic belching as a presentation of conversion disorder and the importance of recognizing this diagnosis in order to optimize patient outcomes.

Introduction

Conversion disorder, or the symptoms described therein, have challenged clinicians for as long as medicine has been practiced. Though many different names have been used to describe these symptoms, from hysteria to functional neurological symptom disorder, **the underlying concept of neurologic symptoms without correlating deficits in neurologic pathways** has remained.[1] Psychogenic belching has been described in the literature from as far back as 1937 and has been noted in children and adults alike.[2-4] When it has been reported, it has often been noted in the context of interpersonal stress, loss, abuse, or neglect, and not often from physically traumatic experiences.[4-6] Studies vary with regard to prevalence, though some suggest it is about 1 in 100 in a hospital setting. Others report incidences of 4-11 in 100,000 in the general population, though this number does increase in the psychiatric subpopulation. It is important to note that these symptoms are not being feigned. **Patients with conversion disorder are experiencing very real symptoms**; however, they do not correlate with neurologic pathways or reflect impairment in neurologic functioning. They often occur in the setting of distressing psychologic symptoms, though this is not always the case. Many cognitive theories have been posited to explain this phenomenon, but there has yet to be a consensus as to what the "pathophysiology" of conversion disorder is.[1] Our case represents an unusual presentation given the inciting event being different from the more commonly reported triggers noted above.

Case Description

Our patient is a 29-year-old female who presented to the emergency department with complaints of dysphagia and constant belching. Of note, **she was in a motor vehicle accident four months prior to presentation and her symptoms began 3 weeks after her accident**. She had seen a neurologist for her symptoms who recommended she present to the ED for urgent MRI given her report of dysphagia. The patient reported the symptoms felt like an air bubble in her throat which worsened upon leaning forward but improved with putting pressure on her neck. She also had neck and back pain since the accident for which she was seeing a chiropractor and physical therapist. Review of systems was otherwise negative other than abdominal pain. There was no history of halitosis since symptom onset. Social history was notable for no tobacco use, occasional alcohol use, and daily cannabis use. Exam was notable for tenderness to palpation of the bilateral paratracheal area, as well as paraspinal and midline cervical spine tenderness; however, no subcutaneous emphysema was noted. She averaged over 1 belch a minute during the evaluation, and when leaning forward the belching worsened and rhythmic contractions were noted in her trunk and upper extremities. Basic laboratory workup was unremarkable other than mildly elevated lipase.

Interventions

Neurology and Gastroenterology were consulted initially. Neurology was concerned for diaphragmatic myoclonus or Zenker's diverticulum, and recommended MRI of the cervical and thoracic spine while inpatient and nonurgent EMG outpatient. For treatment they recommended Thorazine followed by Elavil if no improvement. Gastroenterology recommended barium esophagram and a trial of baclofen and simethicone. MRI and esophagram were unremarkable and patient denied significant improvement with recommended medication. **Neurology concluded, given the lack of findings suggestive of structural or otherwise pathologic etiology to the patient's symptoms, that they were functional or psychosomatic in nature**. This prompted Psychiatry's involvement.

Psychiatric Evaluation

On psychiatric evaluation the patient was polite and cooperative. It was noted that her belching was persistent throughout the interview, but less severe when not talking, which the patient also endorsed. She also reported that the symptoms were worse when she eats. She denied any improvement with any medications trialed during her hospitalization. Notably, she was generally optimistic about her condition and the symptoms improving, but was frustrated as the symptoms were very uncomfortable and impairing her usual functioning. She denied any symptoms consistent with major depressive disorder, mania, generalized anxiety disorder, or psychosis. However, **she did endorse symptoms of PTSD** including reexperiencing memories of her motor vehicle accident and feeling uncomfortable, nervous, and on edge when she was in cars or saw black trucks (similar to the vehicle that hit her). Generally she would try to avoid driving whenever possible and avoided talking about the experience. She also reported noticing black figures in the corner of her eye when she was in the car with her sister but there would never be anything there.

Diagnostic Criteria

Functional Neurological Symptom Disorder (Conversion Disorder):

1.One or more symptoms of altered voluntary motor or sensory function.
2.Clinical findings provide evidence of incompatibility between the symptom and recognized neurological or medical conditions.
3.The symptom or deficit is not better explained by another medical or mental disorder.
4.The symptom or deficit causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or warrants medical evaluation.

Specifiers include:

- **With weakness or paralysis**
- **With abnormal movement** (e.g., tremor, dystonia, myoclonus, gait disorder)
- **With swallowing symptoms**
- **With speech symptom** (e.g., dysphonia, slurred speech)
- **With attacks or seizures**
- **With anesthesia or sensory loss**
- **With special sensory symptom** (e.g., visual, olfactory, or hearing disturbance)
- **With mixed symptoms**
- **Acute episode:** Symptoms present for less than 6 months.
- **Persistent:** Symptoms occurring for 6 months or more.
- **With psychological stressor** (specify stressor)
- **Without psychological stressor**[7]

Discussion

As demonstrated in this case, conversion disorder has a high rate of comorbidity with other psychiatric conditions, including PTSD, anxiety, and depression.[1] Reports estimate the lifetime prevalence of comorbid anxiety and major depression among individuals with conversion disorder with motor symptoms to be 62% and 43%, respectively.[8] It can often be missed in a psychiatric evaluation given the deemphasis on nonpsychiatric complaints that often occur in such evaluations, and vice versa when working up a patient's neurologic complaints. **A multidisciplinary team is critical in such situations to optimize diagnosis and treatment options for patients with conversion disorder**. Psychotherapy is the primary treatment modality, with pharmacotherapy and physical/occupational/speech therapy playing a role when needed. There have even been case reports of improvement with electroconvulsive therapy.[6]

This case is relatively unique in the literature given that the onset of psychogenic belching occurred in the context of a physically traumatic event, though it was very emotionally traumatic as well. It should be noted that the patient did injure her neck in the accident which had continued to bother her in the months after the event, which may be a source of anxiety and stress leading to her presenting symptoms. This case also highlights the correlation between the accident and the onset of symptoms soon after. **It is important to keep in mind that, though present in this case, the symptoms of conversion disorder do not need to occur after the onset of a stressor.** This is different from the past, when diagnostic criteria were more strict regarding this diagnosis.[1]

Conclusion

Conversion disorder can have a varied and subtle presentation, including belching as a primary symptom. It is important to consider the presence of other comorbid psychiatric conditions given their frequent cooccurrence. Diagnosis utilizing a multidisciplinary team including Neurology and Psychiatry as well as others when necessary is important for optimizing diagnostic accuracy and patient outcomes.

References

1. Feinstein, A. (2018). Conversion Disorder. *Continuum: Lifelong Learning in Neurology, 24*(3), 861–872. https://doi.org/10.1212/CON.0000000000000601
2. Viner, N. (1938). The psychogenic origin of some organic syndromes. *Canadian Medical Association Journal, 38*(6), 561–564. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC538410/pdf/canmedaj00193-0033.pdf
3. Sharma, P., Sharma, P. P., Chaudhary, D. P., & Bastola, P. (2014). A Case of Psychogenic Belching. *Journal of Psychiatrists' Association of Nepal, 3*(2), 48–49. https://doi.org/10.3126/jpan.v3i2.12395
4. Siddiqui, J., Qureshi, S., & Mahfouz, T. (2017). Psychogenic Belching – a rare manifestation of conversion disorder. *Indian Journal of Mental Health*. Retrieved from https://www.researchgate.net/profile/Javed-Siddiqui-3/publication/322159145_Psychogenic_Belching_-_a_rare_manifestation_of_conversion_disorder/links/5a492011aca272d29461f99d/Psychogenic-Belching-a-rare-manifestation-of-conversion-disorder.pdf
5. Nagarale, V. A. Jaiswal, S. V., Sawant, V. A., Vahia, V. N., (2017). Psychogenic Belching: A Case Report. *Journal of Clinical and Diagnostic Research*. https://doi.org/10.7860/JCDR/2017/24838.9633
6. Bindra, P., & Tekkalaki, B. (2021). A case of chronic psychogenic belching, responded to ECTs -? Masked depression. *Indian Journal of Behavioural Sciences, 24*(2), 47–48.
7. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.), text rev. https://doi-org.sladenlibrary.hfhs.org/10.1176/appi.books.9780890425787
8. Feinstein, A., Stergiopoulos, V., Fine, J., & Lang, A. E. (2001). Psychiatric outcome in patients with a psychogenic movement disorder: A prospective study. *Neuropsychiatry, Neuropsychology, and Behavioral Neurology, 14*(3), 169–176.