Retrograde Cricopharyngeus Dysfunction “No Burp Syndrome” in a Young Female

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Introduction

- Retrograde cricopharyngeus dysfunction (R-CPD) is a relatively new and rare diagnosis
- It was first defined in 2019 by Dr. Robert Bastian in a published case series involving 51 patients in which he described individuals who experienced numerous gastrointestinal complaints; with the most common being the inability to belch
- Other common symptoms include increased flatulence, abdominal bloating, and gargling noises
- Host patients with R-CPD experience these symptoms throughout the duration of their life
- Many patients with this diagnosis have a similar story: they look up their symptoms online or on social media and find others with similar symptoms
- Diagnosis is made based on symptomatology. However, performing additional testing such as upper aerodigestive tract neurological examination, and videendoscopic swallowing studies (VESS) may assist in the diagnosis
- Injection of the cricopharyngus muscle with intramuscular botulism toxin is the mainstay of treatment

History of Present Illness

- 16-year-old female
- Reports that she had never been able to belch and over the years had seen different specialists with little luck
- The patient explained that some specialists dismissed her symptoms and said they were insignificant while others stated they were likely psychological
- Patient stated she finally decided to research her symptoms on the internet
- From her research, she found the term “retrograde cricopharyngeus dysfunction”
- She was subsequently referred to an otolaryngologist who specializes in vocal cord dysfunction and the diagnosis was confirmed.
- She has tried external Botox injections and the condition improved, but the relief only lasted for a few months

Medical History

- Attention Deficit Hyperactive Disorder (ADHD)
- Anxiety
- Abdominal Bloating

Medications

- Cholecalciferol (Vitamin D3) 125 mcg PO capsule QD
- Diclofenac 18 mg PO capsule QD
- Guanfacine (Tenex) 1 mg PO tablet QD
- Misc Natural Products (Aventis) PO capsule QD
- Multivitamin Adult Extra C PO chewable tablet QD
- Align Extra Strength PO capsule QD
- Sertraline (Zoloft) 100 mg tablet PO QD

Physical Examination

- Vital Signs: T 97.8°F, HR 84 bpm, BP 118/74 mm Hg
- General: No acute distress
- Head: normocephalic, atraumatic
- Lungs: clear to auscultation bilaterally
- Cardiovascular: regular rate and rhythm
- Skin: warm and dry

Surgical Procedure

- The patient underwent direct laryngoscopy and cervical esophagoscopy
- Botulinum toxin was injection into the cricopharyngeus muscle resulting in chemodenervation of the cricopharyngeus muscle
- 80 U of toxin were injected as follows
  - 30 U at the center of the cricopharyngus
  - 25U (2) at the lateral aspects of the muscle

Post procedure

- Patient reported complete relief of her symptoms. She also reported decreased bloating and flatulence

Discussion

- Social media plays an important role in the diagnosis of R-CPD as many individuals share their stories and hardships with symptoms, getting a diagnosis, and treatment
- Early diagnosis and intervention is important as these symptoms can be extremely debilitating and cause increased social anxiety
- Post procedure the most common complication is transient dysphagia
- Long term relief is defined as the continuous ability to belch after 6 months from surgery
- In the original case series 4 out of 51 patients experienced relapse, and underwent a second injection
- Injection of botulism toxin into the cricopharyngeus muscle is considered safe and effective for denervation of the upper esophageal sphincter.
- This method may not only be used for R-CPD but may also be implemented for other esophageal disorders including those who experience difficulty swallowing that may result in aspiration

Conclusion

- It is important for providers to consider R-CPD in their differential when taking care of a patient who experience inability to belch as well as other GI symptoms such as abdominal bloating and increased flatulence
- This disorder can be difficult to diagnose because on physical exam there are not many findings

References

1. Forstner PA, Reynolds C, Bowker B. "Retrograde cricopharyngeus dysfunction: a case series of 51 patients." J Physician Assist Educ 2022; 1:100058262211064061. doi: 10.20524/jpe.2022.03.03.4
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Figure 1: Anatomy of the Upper Airway

Figure 2: Intraoperative view