

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



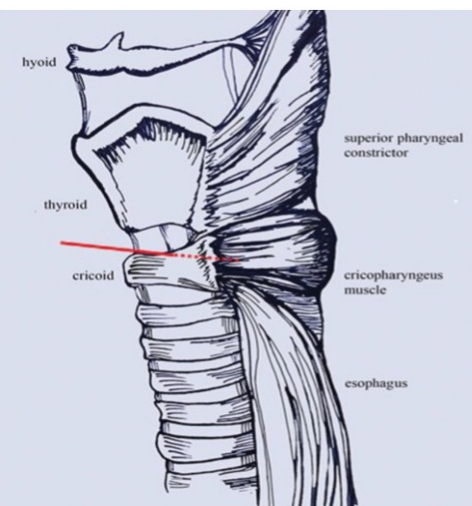
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Introduction

- 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^{1,2}
- Other common symptoms include increased flatulence, abdominal bloating, and gargling noises¹
- Most patients with R-CPD experience these symptoms throughout the duration of their life³
- 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^{1,4}
- Diagnosis is made based on symptomatology. However, performing additional testing such as upper aerodigestive tract neurological examination, and videoendoscopic swallowing studies (VSS) may assisted in the diagnosis²
- Injection of the cricopharyngeus muscle with intramuscular botulinum toxin is the mainstay of treatment²

Figure 1: Anatomy of the Upper Airway.³



History of Present Illness

‘I cannot burp’

- A16-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 D-3) 125 mcg PO capsule QD
Diclofenac 18 mg PO capsule QD
Guanfacine (Tenex) 1 mg PO tablet QD
Misc Natural Products (Atrantil) 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

Vitals: T 97.8 °F, HR 84 bpm, BP118/74 mm Hg RR17 bpm

General: No acute distress
Head: normocephalic, atraumatic
Eyes: extraocular movements intact. **Patient wearing glasses.** **Ears:** impacted cerumen bilaterally.
Neck: supple, no cervical lymphadenopathy.
Throat: oropharynx clear. No posterior oropharyngeal erythema
Lungs: clear to auscultation bilaterally
Cardiovascular: regular rate and rhythm
Skin: warm and dry

The Procedure and Outcome

Surgical Procedure:

The patient underwent direct laryngoscopy and cervical esophagoscopy
Botulinum toxin was injection into the cricopharyngeal muscle resulting in chemo denervation of the cricopharyngeal muscle

80 U of toxin were injected as follows

- 30U at the center of the cricopharyngeus
- 25U (x2) at the lateral aspects of the muscle

Post procedure

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

Figure 2: Intraoperative view.²



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^{1,2,4}
- Early diagnosis and intervention is important as these symptoms can be extremely debilitating and cause increased social anxiety¹
- Post-procedure the most common complication is transient dysphagia¹
- 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 injection⁴
- Injection of botulinum 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 aspiration⁶

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

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