

TO EAT OR NOT TO EAT: A CASE OF SWALLOW SYNCOPE CAUSED BY COMPLETE HEART BLOCK

BLOCK

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Pennsylvania Chapter



Literature Review

- Swallow syncope is defined as a transient loss of consciousness associated with swallowing.
- Less than 150 cases described in the literature worldwide
- This is a type of neurally-mediated syncope stemming from the common innervation of the esophagus and the heart via the vagus nerve. Swallowing initiates peristalsis and dilation of the esophagus which triggers mechanoreceptors in the LES resulting in an exaggerated vagal response. This inhibits the cardiac conduction system leading to various paroxysmal arrhythmias, manifesting as syncope.

Case Synopsis

A 51-year-old female with no significant medical history presents with chronic dysphagia. She underwent an extensive gastrointestinal workup with unremarkable EGDs, decreased lower esophageal sphincter (LES) pressure on manometry, and moderate reflux disease on barium swallow. She endorsed feelings of lightheadedness associated with periods of dysphagia and developed multiple syncopal events requiring hospitalization. Syncopal workup included EKGs showing sinus bradycardia and a normal transthoracic echocardiogram (Fig.1). A 14-day Holter monitor demonstrated intermittent complete heart block with significant symptomatic sinus pauses up to 7.4 seconds (Fig.2) during periods of eating, ultimately leading to a diagnosis of swallow syncope and requiring permanent pacemaker implantation.

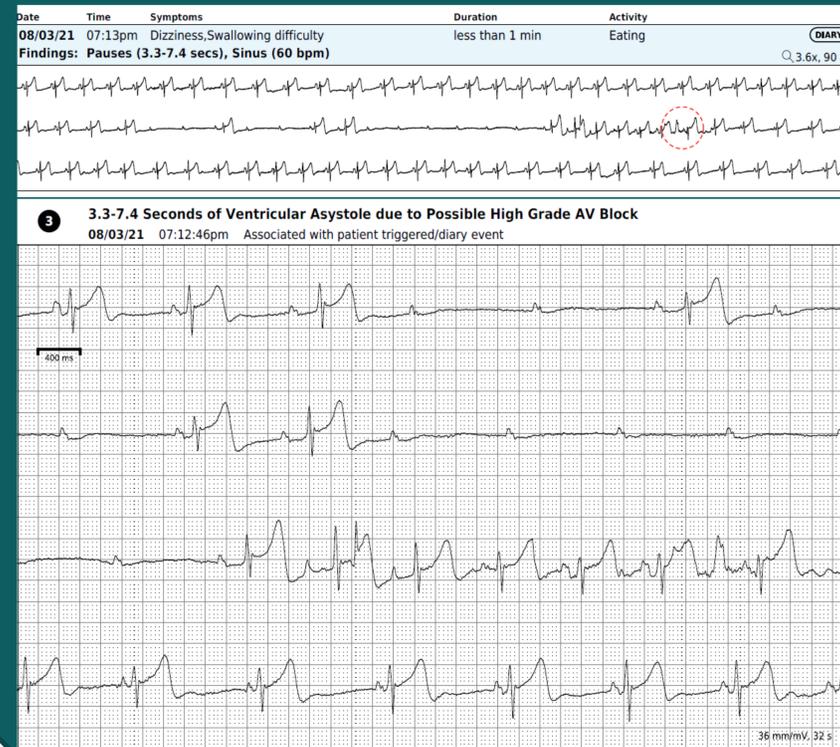


Fig 2. 14-day cardiac monitor revealing complete heart block with symptomatic pauses up to 7.4s. with eating.

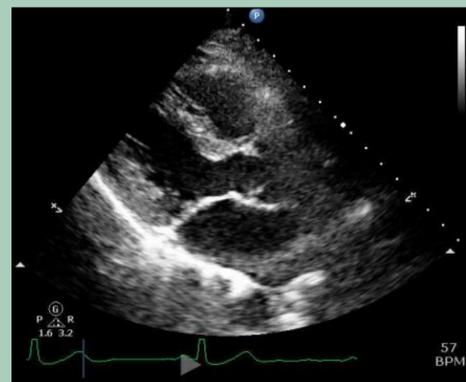


Fig 1a, b. TTE parasternal long axis and apical 4 chamber views showing normal heart function with aortic valve sclerosis but no stenosis.

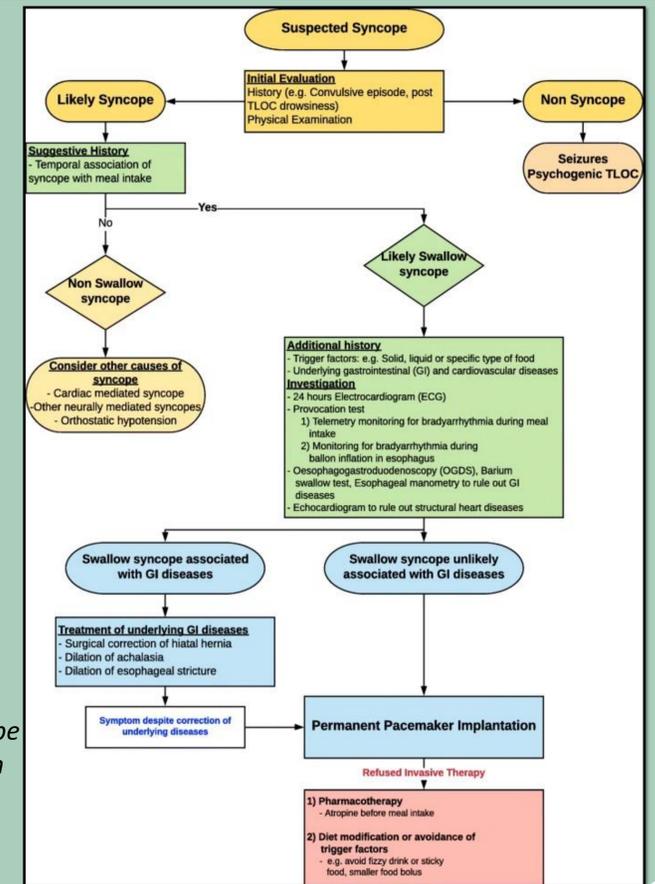
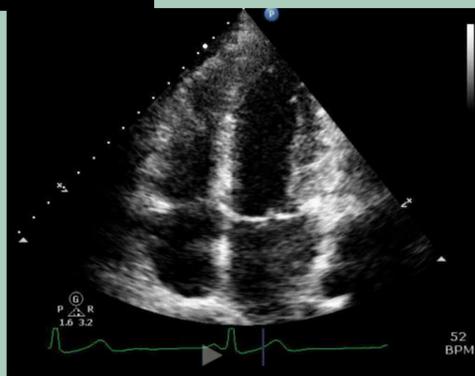


Fig 3. Siew et al., 2019
Deglutition syncope work-up approach when swallow syncope is suspected.

Recommendations

Once patients are diagnosed with swallow syncope, treatment options are limited. The primary focus is to avoid triggers that are identified to precipitate syncopal events. Those who develop arrhythmic complications require evaluation for a definitive treatment with consideration for permanent pacemaker implantation. This case highlights the importance of recognizing this rare association between dysphagia and syncope in order to prevent life-threatening arrhythmias such as symptomatic intermittent complete heart block.

References

1. Kang KH, Cho WH, Kim MC, Chang HJ, Chung JI, Won DJ. Cases of swallow syncope induced by the activation of mechanoreceptors in the lower esophagus. Korean J Intern Med. 2005;20(1):68-71. doi:10.3904/kjim.2005.20.1.68
2. Siew KSW, Tan MP, Hilmi IN, Loch A. Swallow syncope: a case report and review of literature. BMC Cardiovasc Disord. 2019;19(1):191. Published 2019 Aug 7. doi:10.1186/s12872-019-1174-4
3. Trinco P, Falque B, Stilman AC, Windhausen K. La syncope de déglutition : cas clinique [A case of swallow syncope]. Rev Med Liege. 2016;71(7-8):360-363.
4. Uruguchi, K, Kariya, S, Makihara, S, et al. Dangerous noodle: A case of swallowing syncope and a review of 122 cases from the literature. J Arrhythmia. 2019; 35: 145– 148. https://doi.org/10.1002/joa3.12130

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