A Case Series Review of the Management of Achalasia in the Low Resource Setting of Barbados

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Abstract

Achalasia is an uncommon disorder affecting the esophagus where there is a failure of relaxation of the lower esophageal sphincter along with abnormal peristalsis both contributing to a functional obstruction at the gastroesophageal junction.
Previous research has suggested that the incidence of this condition is 1.6 per 100,000 persons per year with a prevalence around 10.8/100,00 persons.
Barbados' population is estimated to be made up of almost 300,000 persons. We recognized our private care center managed a significant amount (40%) of the expected number of cases from 2012-2022 and thought it would be beneficial to review the management and outcome of these cases.

Objectives and Methods

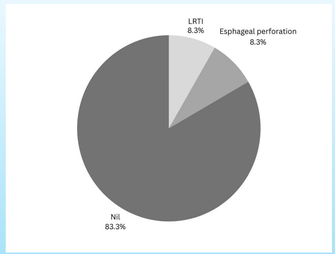
- To review the outcomes of achalasia patients in a low-resource setting
- To address the feasibility of introducing newer technologies given the island's economic limitations
- Review of the company records using the keywords achalasia, Heller's cardiomyotomy, and Dor fundoplication led to the identification of 12 patients
- Most patients were female; only 2 males were identified for the study
- Patients' ages ranged between 21-95 years; the mean age was 51 years.
- Each patient was managed by the same surgeon
- All patients identified had at minimum a barium swallow or endoscopy before referral to the facility; where no endoscopy was done before referral it was performed by the surgeon himself
- In only 1 case was serial dilation chosen as the initial method of management. Ultimately, each patient in the study underwent laparoscopic Heller's cardiomyotomy
- Unfortunately, no standardized scoring system was used to compare quality of life before and post-management; outcomes were based on the patient's subjective feeling of improvement.

Results

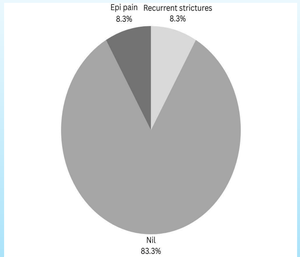
Patient No.	Sex	Age at time of diagnosis	Presenting complaint	Year of Heller's cardiomyotomy	Complications	Need for re-referral post discharge
1	F	49	Frequent vomiting/regurgitation, weight loss	2020	Nil	Nil
2	F	35	Chronic dyspepsia, new-onset dysphagia	2013	Nil	Nil
3	F	57	Dysphagia, weight loss	2012	Nil	Nil
4	F	62	Dyspepsia, dysphagia, weight loss	2012	Nil	Nil
5	M	60	Dysphagia, weight loss	2019	Nil	Nil
6	F	41	Dysphagia, episodic chest pain	2016	Nil	Nil
7	F	40	Unclear	2014	Nil	Epigastric pain
8	M	21	Dysphagia	2014	Nil	Nil
9	F	59	Dysphagia	2014	Nil	Nil
10	F	95	Dysphagia	2013	LRTI	Nil
11	F	58	Dysphagia, dyspepsia, weight loss	2012	Esophageal perforation	Recurrent strictures
12	F	37	Epigastric pain, weight loss	2013	Nil	Nil



More females than males were identified for the study



Complications Noted Post Laparoscopic Heller's Cardiomyotomy



Complications Leading to Re-Referral

Discussion

- Achalasia is an esophageal motility disorder associated with abnormal peristalsis as well as lower esophageal sphincter relaxation caused by loss of inhibitory nitriginergic neurons in the esophageal myenteric plexus.
- It may be idiopathic or due to secondary causes such as esophageal cancer. The research is focused on idiopathic cases.
- Barbados' resources are limited and therefore review of patient outcomes in this setting is beneficial.
- While high-resolution manometry (HRM) is the gold standard for investigation, there is no access to this technology on the island and investigation is limited to barium esophagram and endoscopy.
- The sensitivity of barium esophagram in diagnosing motility disorders is 56-69% vs endoscopy which is 41-94%. Not only is HRM the most sensitive method of detection but it may also be used to distinguish different types of achalasia and tailor plans to each patient.
- Management in the setting of Barbados may involve medical management, pneumatic dilation, or most frequently laparoscopic Heller's cardiomyotomy. Where medical management or pneumatic dilation were employed in this study, they were unsuccessful and ultimately all patients underwent laparoscopic Heller's cardiomyotomy.
- Laparoscopic Heller's cardiomyotomy remains the gold standard treatment.
- 92% of patients noted significant improvement at follow up with only one patient requiring re-referral 4 years later.
- This study was performed in a private care setting and outcomes in the public sector are likely to differ based on availability of resources and limited expertise. Delays in management are also likely to impact outcomes.
- In settings such as Barbados where financial resources are lacking one must consider whether there is not only significant benefit to patients but the long-term economic benefit to implementing new technologies
- Given the low expected patient volume and good patient outcomes despite investment in new technologies, investment in new technologies in the future may have potential benefit but is not deemed necessary.

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