Outcomes of Endoscopic Ablative Therapy and Surgical Management in Barrett's Esophagus: Development of a Multidisciplinary Database

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BACKGROUND

- Barrett's esophagus (BE) is a premalignant condition that can progress to adenocarcinoma of the esophagus and gastroesophageal junction.
- Endoscopic therapies such as endoscopic mucosal resection (EMR) and radio frequency ablation (RFA) are effective at treating dysplasia in BE. However, it is unclear how to maintain that dysplasia free state, as dysplasia is likely to recur without further intervention.

INTRODUCTION

- Common treatment modalities for BE include medical management with proton pump inhibitors (PPIs) or fundoplication, a surgical intervention.
- There is a lack of clear guidelines on how to optimally utilize these treatment modalities to prevent dysplasia and its recurrence in BE.
- We developed the first multidisciplinary database of patients with BE who received endoscopic treatment, monitoring both medical and surgical parameters.
- Tracking these patients allows for more effective, timely intervention that has the potential to decrease the rate of esophageal adenocarcinoma.

Aim: Assessing the optimal monitoring for recurrence free status post endoscopic therapy in patients with BE.

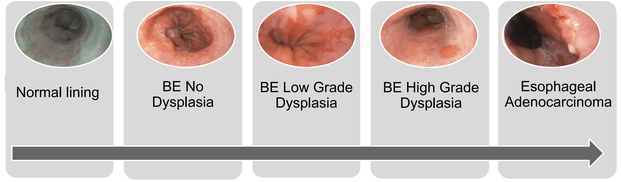
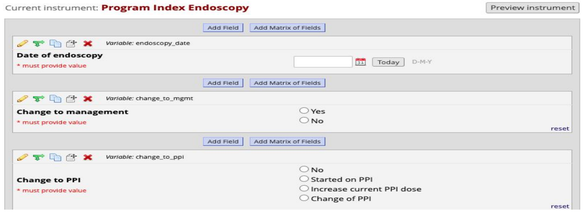


Figure 1. Endoscopic view of progression of Barrett's esophagus. BE - Barrett's esophagus.

METHODS

- We developed a prospective database of patients with BE who had received endoscopic surveillance or treatment, including EMR, RFA, argon plasma coagulation (APC), or a combination.
- The database was created in RedCAP, a secure, cloud based database.
- We sought feedback from specialists in both Gastroenterology and General Surgery to ensure all data fields were comprehensive.



RESULTS

- As our proof of concept, seven patients referred to the Gastroenterology clinic at the Royal Alexandra Hospital were enrolled in our database. These patients all had confirmed BE and had received endoscopic surveillance or treatment.
- The majority of patients were male (n=5) with a mean age of 66 years, and a range of 54 - 80 years of age.
- Patients were referred from the endoscopic ablation program (n=5), general surgery (n=1) and gastroenterology (n=1).
- Initial endoscopic diagnoses included non-dysplastic (n=1), esophageal adenocarcinoma (EAC) (n=1), indefinite for dysplasia (n=2), low grade dysplasia (n=1), and high grade dysplasia (n=2).
- All participants presented to the clinic already prescribed a PPI.
- Of these seven patients, two are currently awaiting surgery and five have undergone laparoscopic Nissen fundoplications, of which three had concurrent hiatal hernia repairs.

RESULTS

- To date, three of the five participants who have undergone surgery have been seen in the endoscopic clinic for post surgical follow up.
- One of these patients remains dysplasia free and their PPI dose was decreased.
- The second patient had refractory heartburn symptoms and their PPI was resumed. They continue to receive APC post surgery.
- The third patient progressed from non-dysplastic BE after endoscopic treatment prior to surgery to adenocarcinoma post fundoplication and is continuing to receive RFA post surgery and PPI therapy for ongoing BE.

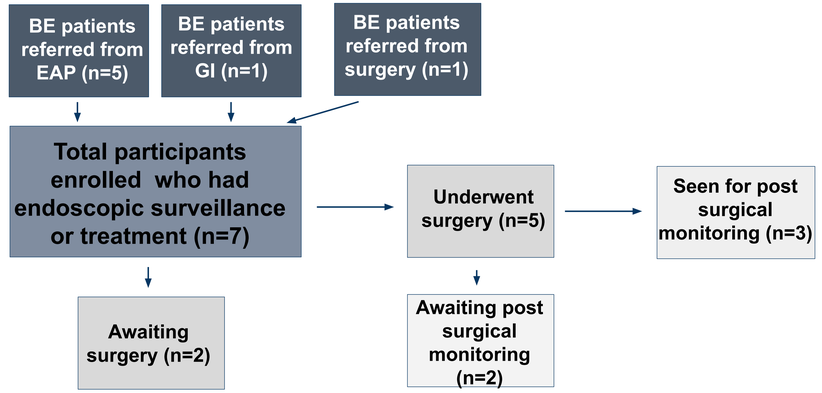


Figure 2. Treatment pathway patients enrolled in the database have followed. EAP - endoscopic ablation program, GI - gastroenterology.

CONCLUSIONS

- Our novel database has been shown to successfully monitor both medical and surgical parameters of patients with BE.
- With additional participants and longitudinal data, the findings from our database can be used in the development of future clinical guidelines to reduce the rate of esophageal adenocarcinoma from BE.

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