هـيـئـة الصـحـة بدبـي
DUBAI HEALTH AUTHORITY

إجـادة
EJADA

EJADA Program

Gastroesophageal Reflux Disease (GERD)

KPIs and recommendations

2023

Content

Introduction

Gastroesophageal reflux disease (GERD) is a chronic gastrointestinal disorder that occurs when stomach acid flows back into the esophagus, causing symptoms such as heartburn and regurgitation. GERD can also present in an atypical fashion with extra-esophageal symptoms such as chest pain, dental erosions, chronic cough, laryngitis, or asthma. Risk factors for GERD include older age, smoking, anxiety/depression, excessive body mass index (BMI), and less physical activity at work. Other factors such as eating habits may also contribute to GERD (acidity of the food, portion size, meal timings, etc).

GERD can be diagnosed based on presenting symptoms or in combination with other factors such as responsiveness to antisecretory therapy, esophagogastroduodenoscopy, and ambulatory reflux monitoring. The goals of managing GERD are to address the resolution of symptoms and prevent complications such as esophagitis, Barrett's esophagus, and esophageal adenocarcinoma. Treatment options for GERD include lifestyle modifications, medical management with antacids and antisecretory agents, surgical therapies, and certain endoluminal therapies.

The management of GERD typically begins with an empiric trial of proton pump inhibitor (PPI) therapy and complementary lifestyle measures for patients without alarm symptoms. Optimizing therapy by improving compliance and timing and titration of PPI doses can reduce persistent symptoms. Patients with continued symptoms should be evaluated with endoscopy and tests of esophageal physiology to better determine their disease phenotype and optimize treatment. Laparoscopic fundoplication, magnetic sphincter augmentation, and endoscopic therapies can benefit patients with well-characterized GERD. Endoluminal therapies provide efficacious symptomatic control in a subset of patients and serve as a good alternative to medical or surgical treatment.

Scope

The Ejada KPIs are quality indicators and ratings for physicians, facilities and insurance companies based on information collected by DHA systems from providers, payers and patients.

The GERD KPIs and Recommendations are based on internationally accepted clinical guideline for the diagnosis and management of GERD. The KPIs are designed for healthcare practioners and providers to follow international best practices in the management of GERD patients.

The GERD KPIs cover the following aspects of GERD management:

- Diagnostic Endoscopy for GERD in patients with and without alarm symptoms
- Pharmacological and surgical management of GERD
- Referral for specialized consultation

The KPIs and recommendations have been reviewed by leading experts in UAE

List of Abbreviations

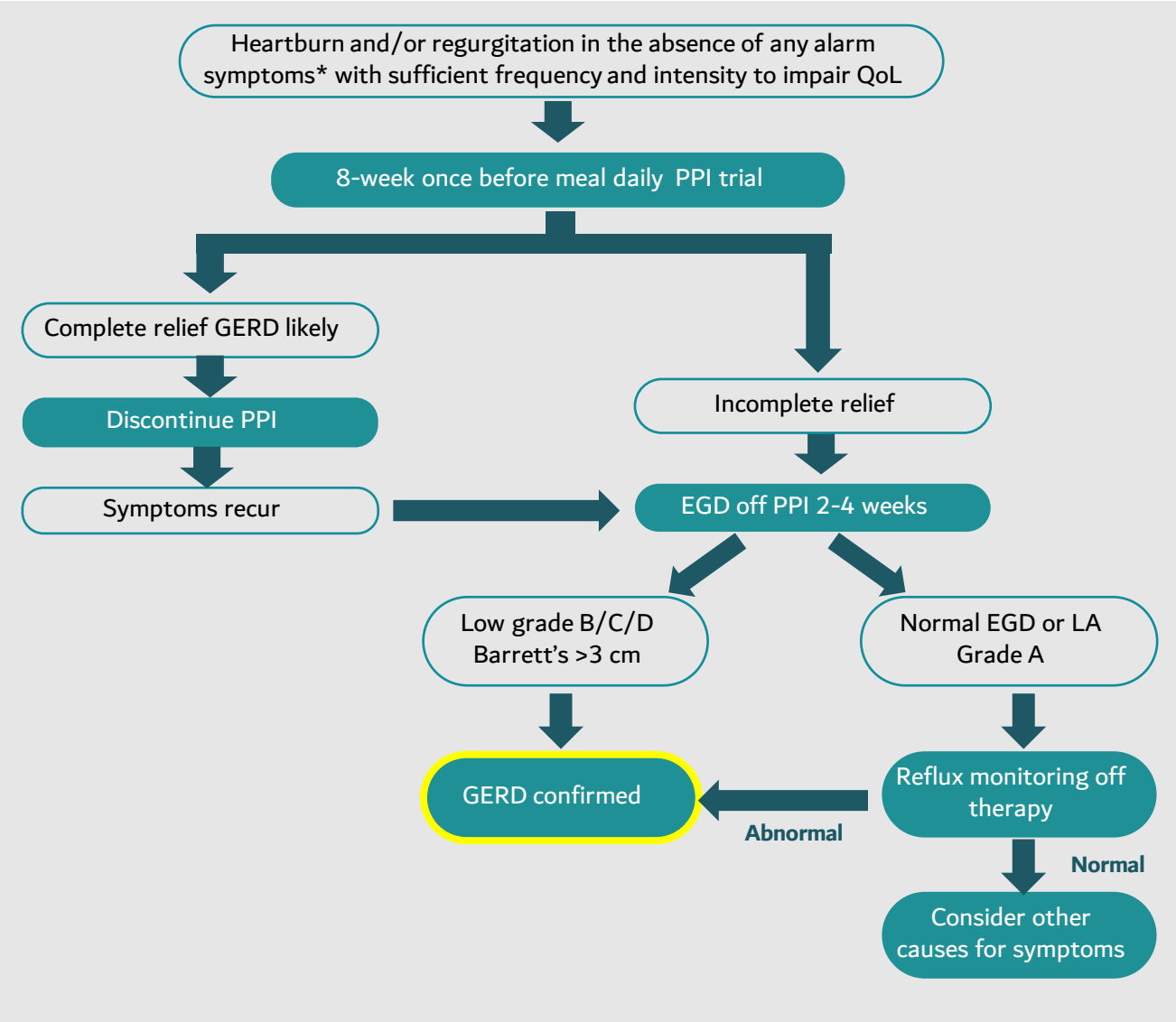
S.No.	Abbreviation	Full form
1	BID	Twice a day
2	EE	Erosive esophagitis
3	EGD	Esophagogastroduodenoscopy
4	GERD	Gastroesophageal reflux disease
5	GI	Gastrointestinal
6	LA	Los Angeles
7	LES	Lower esophageal sphincter
8	MSA	Magnetic sphincter augmentation
9	NERD	Non-erosive reflux disease
10	PPI	Proton pump inhibitor
11	QOL	Quality of life
12	RCT	Randomized controlled trial
13	RYGB	Roux-en-Y gastric bypass
14	SAP	Symptom association probability
15	SI	Symptom index
16	TIF	Transoral incisionless fundoplication

KPIs and their Measuring Parameters

Reporting Frequency: Monthly

S.No.	KPIs	Measuring Parameters
1	Assessment of GERD with PPI Trial	Dispensed PPIs
2	Assessment of GERD with Diagnostic Endoscopy in patients not responding to PPI	Endoscopy
3	Assessment of GERD with Diagnostic Endoscopy in patients having alarm symptoms	Endoscopy
4	Assessment of GERD with Reflux Monitoring	pH or impedance pH
5	GERD Medical Management - PPI therapy for healing erosive esophagitis	Dispensed PPIs
6	GERD Medical Management - PPI Therapy for NERD or non-complicated GERD	Dispensed PPIs
7	GERD Surgical Management	Surgical procedures for GERD

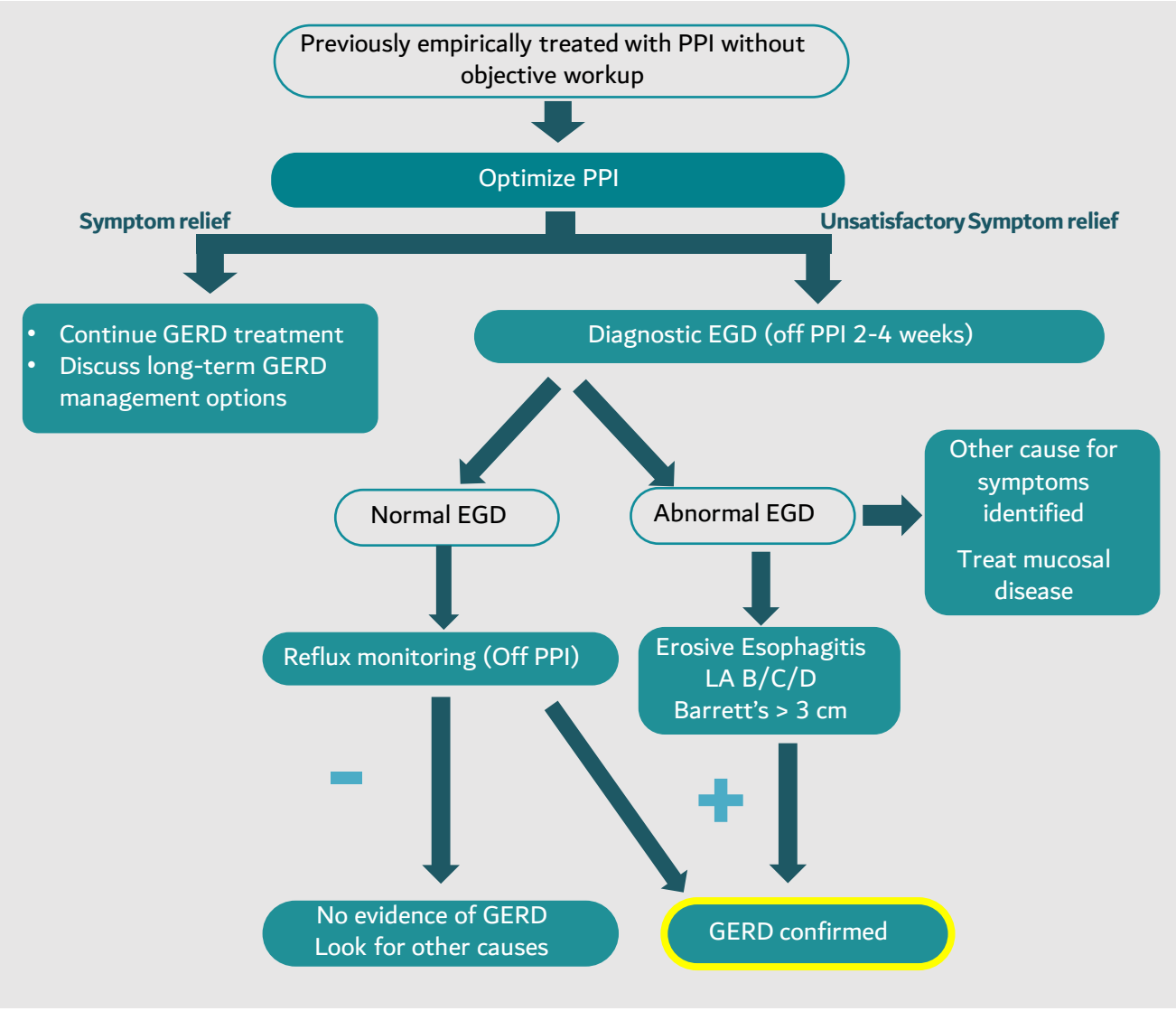
Diagnosis of GERD



*Alarm symptoms such as *dysphagia, weight loss, bleeding, vomiting, and/or anemia should be investigated early with an EGD and does not necessitate PPI trial*

ADAPTED & MODIFIED FROM:
American College of Gastroenterology Clinical Guidelines on Diagnosis and Management of GERD-2022
https://journals.lww.com/ajg/fulltext/01000/acg_clinical_guideline_for_the_diagnosis_and.14.aspx

Management algorithm of symptoms suspected because of GERD incompletely responsive to PPIs, previously empirically treated with PPI without objective workup



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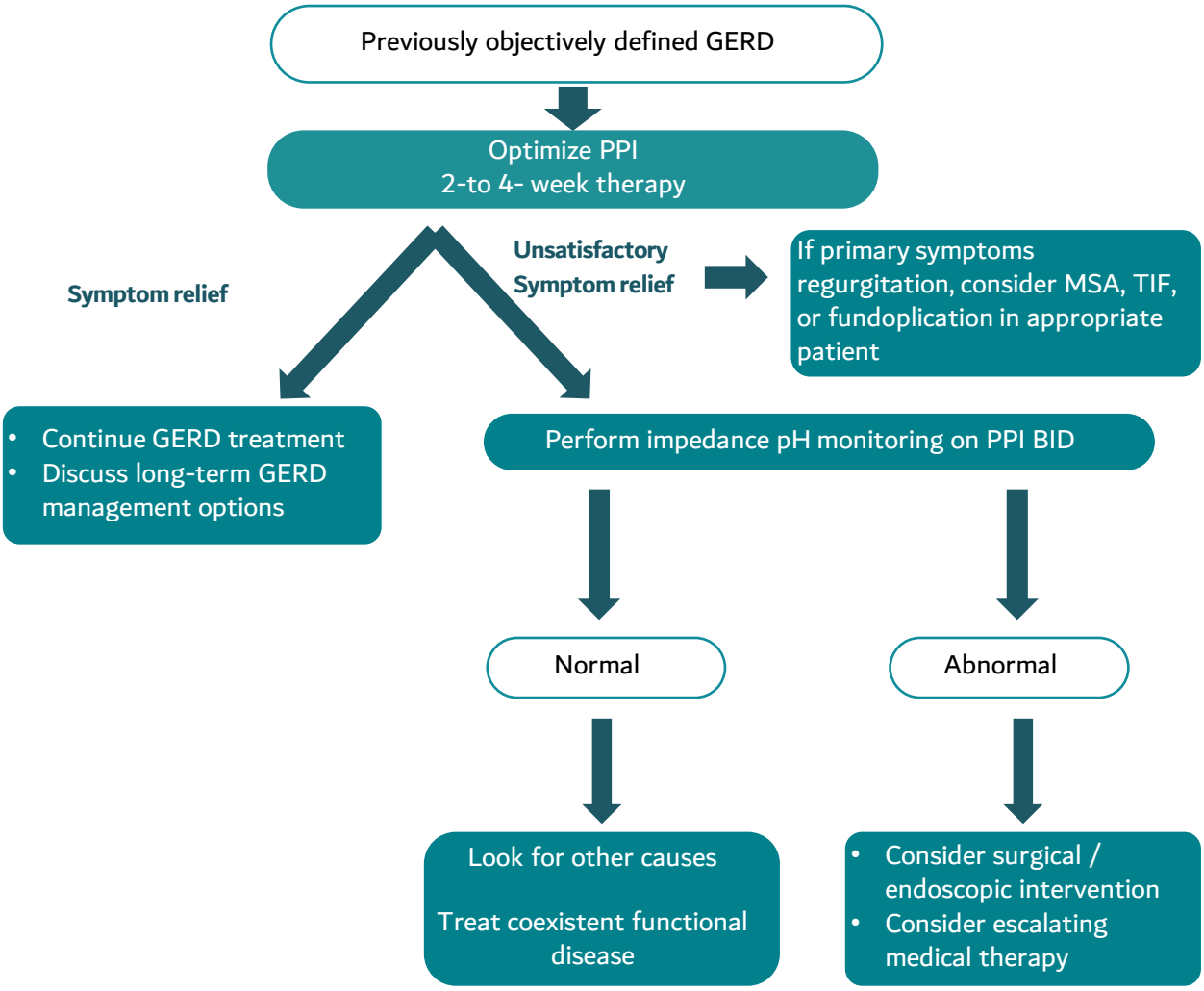
Management algorithm of symptoms suspected because of GERD incompletely responsive to PPIs in patients previously objectively defined as GERD



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Health Outcomes Indicators

Assessment of GERD with Empiric PPI Trial

Description Title	Assessment of GERD with PPI trial
Definition	Percentage of patients presenting with heartburn prescribed with 8-week trial of PPIs once daily before a meal
Numerator	Number of patients presenting GERD symptoms (heartburn and or regurgitation) prescribed with 8-week trial of PPIs once daily before a meal
Denominator	Total number of patients presenting with GERD symptoms (heartburn and or regurgitation) who have no alarm* symptoms
Exclusion criteria	Patients with no GERD symptoms or with alarm symptoms
Unit of measure	Percentage (Numerator/Denominator x 100)
Measure target and/or threshold	Higher is better
Rationale	Heartburn and regurgitation remain the most sensitive and specific symptoms for GERD. Most consensus statements and guidelines advocate a trial of therapy with a PPI as a diagnostic "test" in patients with the typical symptoms of heartburn and regurgitation, with the underlying assumption that a PPI response establishes the diagnosis of GERD.

Alarm symptoms such as dysphagia, weight loss, bleeding, vomiting, and/or anemia

Diagnostic Endoscopy in Patients not Responding to PPI

Description Title	Diagnostic endoscopy in patients not responding to empiric PPI
Definition	Percentage of patients who underwent diagnostic endoscopy for GERD not responding to PPI
Numerator	Number of patients who underwent diagnostic endoscopy after 8 or more weeks of continuous trial of PPIs
Denominator	Total number of GERD patients who underwent diagnostic endoscopy
Exclusion criteria	Patients who underwent diagnostic endoscopy for alarm symptoms
Unit of measure	Percentage (Numerator/Denominator x 100)
Measure target and/or threshold	Higher is better
Rationale	Upper GI endoscopy is the most widely used objective test for evaluating the esophageal mucosa. For patients having endoscopy for typical GERD symptoms, normal mucosa is the most common finding. To maximize the yield of GERD diagnosis and assess for erosive esophagitis, diagnostic endoscopy should ideally be performed after PPIs have been stopped for 2 weeks and perhaps till 4 weeks if possible.

Diagnostic Endoscopy in GERD Patients with Alarm Symptoms

Description Title	Diagnostic Endoscopy in patients with alarm symptoms
Definition	Percentage of patients who underwent diagnostic endoscopy for GERD in last 12 months for alarm symptoms
Numerator	Number of patients who underwent diagnostic endoscopy when presenting with dysphagia or other alarm symptoms (weight loss and GI bleeding), including patients with findings of erosive esophagitis and/or Barrett's esophagus on diagnostic endoscopy in last 12 months
Denominator	Total number of GERD patients presenting with alarm symptoms
Exclusion criteria	Patients of GERD with no alarm symptoms, exclude patients on PPIs for 8 or more continuous weeks
Unit of measure	Percentage (Numerator/Denominator x 100)
Measure target and/or threshold	Higher is better
Rationale	For patients with GERD symptoms who also have alarm symptoms such as dysphagia, weight loss, bleeding, vomiting, and/or anemia, endoscopy should be performed as soon as feasible. The endoscopic findings of erosive esophagitis and Barrett's esophagus are specific for the diagnosis of GERD.

Alarm symptoms such as dysphagia, weight loss, bleeding, vomiting, and/or anemia

Reflux Monitoring in Patients with GERD

Description Title	Reflux monitoring in patients with suspected GERD
Definition	Percentage of patients who underwent reflux monitoring for GERD in last 12 months
Numerator	Number of patients who underwent reflux monitoring when the diagnosis of GERD was suspected but not clear even on endoscopy in last 12 months
Denominator	Total number of patients with GERD who underwent endoscopy
Exclusion criteria	• Patients known to have endoscopic evidence of Los Angeles (LA) grade C or D reflux esophagitis • Patients with long-segment Barrett's esophagus
Unit of measure	Percentage (Numerator/Denominator x 100)
Measure target and/or threshold	Higher is better
Rationale	Ambulatory reflux monitoring (pH or impedance-pH) allows for assessment of esophageal acid exposure to establish or refute a diagnosis of GERD and for correlating symptoms with reflux episodes using the symptom index (SI) or symptom association probability (SAP).

GERD Medical Management - PPI maintenance therapy for healing erosive esophagitis

Description Title	PPI maintenance therapy for healing erosive esophagitis
Definition	Percentage of patients prescribed with PPI maintenance therapy for healing erosive esophagitis in last 12 months
Numerator	Number of patients with GERD with severe EE (LA grade C or D) and/or Barrett's esophagus prescribed with PPI maintenance therapy in last 12 months
Denominator	Total number of patients with confirmed diagnosis of GERD with erosive esophagitis and/or Barrett's esophagus in last 12 months
Exclusion criteria	GERD patients who have no evidence of GERD complications
Unit of measure	Percentage (Numerator/Denominator x 100)
Measure target and/or threshold	Higher is better
Rationale	PPIs have ample data demonstrating consistently superior heartburn and regurgitation relief, as well as improved healing. Maintenance PPI therapy should be administered for patients with GERD complications including severe EE (LA grade C or D) and Barrett's esophagus.

GERD Medical Management - PPI maintenance therapy for healing erosive esophagitis

Description Title	PPI on-demand therapy for NERD or non-complicated GERD
Definition	Percentage of patients prescribed with PPI on-demand therapy in last 12 months
Numerator	Number of patients with non-complicated GERD prescribed with PPI only when symptoms occurred and discontinued when they were relieved in the last 12 months
Denominator	Total number of patients with non-complicated GERD in last 12 months
Exclusion criteria	Patients with continuous PPI treatment of more than 8 weeks duration; Patients having GERD with complications
Unit of measure	Percentage (Numerator/Denominator x 100)
Measure target and/or threshold	Higher is better
Rationale	In patients with non-erosive reflux disease (NERD) and otherwise non-complicated GERD can be managed successfully with on-demand or intermittent PPI therapy. In a systematic review of RCTs comparing on-demand PPI vs placebo, symptom-free days for patients with NERD in the on-demand arm were equivalent to rates for patients on continuous PPI therapy, and both on-demand and continuous PPIs were superior to placebo.

GERD Surgical Management

Description Title	Surgery for severe GERD
Definition	Percentage of patients who underwent surgery for GERD in last 12 months
Numerator	Number of patients who underwent surgery for GERD in last 12 months
Denominator	Total number of patients with GERD in last 12 months who were on continuous medical management
Exclusion criteria	Fundoplication, Magnetic Sphincter Augmentation, Roux-en-Y gastric bypass. Transoral incisionless fundoplication done for non-GERD indications
Unit of measure	Percentage (Numerator/Denominator x 100)
Measure target and/or threshold	Lower is better
Rationale	Patients with severe reflux esophagitis (LA grade C or D) will require PPI therapy indefinitely to maintain healing. Many patients are uncomfortable with the prospect of lifelong PPI treatment, hence opt for surgery. Fundoplication, especially Nissen fundoplication, is widely regarded as the “gold standard” among the anti-reflux procedures. MSA with the LINX Reflux Management System, a necklace of titanium beads with magnetic cores that encircles the distal esophagus to bolster the LES and prevent reflux, was developed as a less invasive and more readily reversible GERD treatment than fundoplication. MSA is a safe and effective alternative to laparoscopic fundoplication. RYGB can control GERD in obese patients, presumably because the small gastric pouch fashioned during RYGB produces far less acid than an intact stomach, and because the accompanying long alimentary loop prevents the reflux of bile. TIF attempts to create a flap valve involving 180° to 270° of the circumference of the esophagogastric junction by plicating a portion of the proximal stomach using a series of T-fasteners.

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