AUGIS
Association of Upper Gastrointestinal Surgeons of Great Britain and Ireland

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ADVANCING SURGICAL STANDARDS

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Commissioning guide:

Gastro-oesophageal reflux disease (GORD)

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Glossary

Term	Definition
NSAID	Non-steroidal anti-inflammatory drugs
H2RA	Histamine2-receptor antagonists
PPI	proton pump inhibitors

Introduction

This guide focuses on the treatment of gastro-oesophageal reflux symptoms, such as heartburn, regurgitation and swallow discomforts. It should be understood that for most this is a chronic, lifelong condition, requiring a balance of lifestyle measures, medical treatments and occasionally referral for further interventions.

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1 High Value Care Pathway for GORD

1.1 Primary Care

History

- Review of all current medication and over-the-counter herbal preparations, specifically NSAIDs/ corticosteroids/ bisphosphonates/ nitrates/ theophylline.
- Identify psychological–social stressors.
- Assess severity of symptoms – Use GerdQ (see directory [patient information] below).
- Physical examination to rule out upper abdominal mass.

Investigation

- Full blood count/urea and electrolytes/liver function test/coeliac screen (if iron deficiency anaemia) may assist decision on specialist assessment.

Refer urgently in accordance with local guidelines to a team specialising in the diagnosis of upper GI cancer if any of the following detected:

- Dysphagia

- Progressive unintentional weight loss
- Persistent vomiting
- Dyspepsia or reflux and Iron deficiency anaemia, or chronic gastrointestinal bleed
- Epigastric mass/suspicious barium meal
- >55 years with unexplained and persistent (>4–6 week) recent-onset reflux
- Worsening reflux with known Barrett's oesophagus/ atrophic gastritis/ intestinal metaplasia/ dysplasia or previous peptic ulcer surgery /family history of upper GI cancer in more than two first-degree relatives

Offer all patients advice regarding:

- Lifestyle and healthy eating. Suggest that the patient decrease the fat content in their diet; make the patient aware of potential food triggers including chocolate/coffee/alcohol/onion/garlic/spicy foods
- Weight reduction
- Smoking cessation
- Avoiding recumbency for three hours after meals
- Raising head of bed by 20 cm, or using multiple pillows
- Management of psychological–social stressors if present

Evidence to support this advice is weak but adjustments can help patients cope with reflux so should be considered and tried.

Medical treatment

- Alginateantacid combination/H2RA treatments useful for mild heartburn.
- A trial of a PPI for one to two months for more persistent symptoms. Many patients require long term therapy necessitating at least annual review. Aim to use lowest effective dose.
- If the patient responds poorly to PPI consider doubling the dose. Reassessment at two to three months +/- Upper GI Endoscopy if symptoms continue.
- If additional medication needed to control symptoms consider prokinetics such as domperidone.
- If PPI is not well tolerated or effective then patients may respond to H2RA.

Refer to secondary care provider if:

- The patient's quality of life remains significantly impaired and there are persistent symptoms despite medical treatment and lifestyle modification, or if the patient expresses a preference to consider surgery rather than continue long term medical treatment. Perform a GerdQ Questionnaire to identify the degree of symptom burden before onward referral as this can be useful in postoperative follow-up.

1.2 Secondary Care

Secondary care will provide a re-assessment of the need for further intervention and a balance of the potential risks and outcomes.

Indications for surgical procedures include:

- Volume reflux, especially affecting sleep, or during physical activities that involve stooping.
- Breakthrough symptoms of heartburn despite optimal medical therapy.
- Intolerance of proton pump inhibitors.
- Patient preference to avoid lifelong medication.
- Post prandial chest pain, or dysphagia from incarcerated para-oeosphageal hernia.
- Atypical symptoms such as aspiration, cough or hoarse voice if confirmed on pH testing.

Investigation

- Upper GI Endoscopy to assess the degree of oesophageal injury, diagnose the presence or absence of Barrett's oesophagus and biopsy to exclude Eosinophilic oesophagitis or oesophageal malignancy.
- Oesophageal manometry and 24-hour pH monitoring studies to prove the presence of pathological reflux and to exclude the presence of underlying oesophageal motility disorders.

What does surgery involve?

Laparoscopic anti-reflux surgery can be performed as a day case or with a short inpatient admission. There are a number of different surgical procedures described (eg Nissen, Toupet and Watson fundoplications), which are all variations of the degree and shape of folding the stomach around the lower oesophagus. The components of anti-reflux surgery involve:

1. Repairing the hiatus (the opening in the diaphragm through which the oesophagus passes) which will fix a hiatus hernia.
2. Fundoplication which creates a barrier to the reflux of gastric contents into the oesophagus by wrapping the upper part of the stomach (fundus) around the oesophagus, creating a sling. There is debate around the 'optimal' fundoplication, but the approach depends on the training and personal experience of the operating surgeon. It would not be appropriate to recommend any particular type of fundoplication over another.

A different approach may be necessary when there is a large (possibly obstructing) para-oesophageal hernia, when a large amount of stomach has prolapsed into the chest. This tends to occur in the elderly and it is sometimes only necessary to repair the diaphragmatic defect and fix the stomach in the abdomen (gastropexy) without performing a fundoplication.

The most important determinant of a good outcome in a population after anti-reflux surgery is appropriate selection of patients for surgery. There are some situations where an adverse outcome is more likely and they include:

- Failure of acid suppression to make any difference to symptom control. Classical and volume reflux symptoms should be partially controlled or, at least, helped by acid-suppression therapy.
- Normal preoperative 24-hour pH tracing.
- Co-existent oesophageal motility disorder.
- Gastroparesis or significant symptoms suggestive of irritable bowel syndrome.
- Atypical reflux symptoms – this group has a lower success rate from surgery than patients with classical or volume reflux.

2 Procedures explorer for GORD

1. Nissen 360 degree fundoplication + repair hiatus
2. Watson partial anterior fundoplication + repair hiatus
3. Toupet partial posterior fundoplication repair hiatus
4. Gastropexy + repair hiatus hernia

Procedures that are under research regulation or restricted to long term registry follow-up (these are not recommended for commissioning but may form part of the range of procedures offered at specialist centres performing suitable registered research projects):

1. **Stretta**: endoscopic microwave ablation
2. **Esophyx**: endoscopic plication
3. **Linx**: magnetic bead bracelet around oesophagus
4. **Endostim**: electrical stimulation of the lower oesophageal sphincter

Users can access further procedure information based on the data available in the quality dashboard to see how individual providers are performing against the indicators. This will enable CCGs to start a conversation with providers who appear to be 'outliers' from the indicators of quality that have been selected.

The Procedures Explorer Tool is available via the Royal College of Surgeons website.

3 Quality dashboard for GORD

Laparoscopic anti-reflux surgery has a low mortality (<0.3%) with most deaths ascribed to postoperative cardiac events. Complications specific to laparoscopic anti-reflux surgery can be divided into immediate or delayed, with the former being much rarer, but tending to require operative intervention.

Immediate complications include:

- bleeding;
- perforation of oesophagus/proximal stomach;

- re-herniation of the stomach into the chest; and
- slippage of the wrap.

Delayed complications include:

- dysphagia (difficulty in swallowing), which is very common in the first few weeks and usually settles spontaneously;
- gas bloat – the sensation of 'trapped wind' after eating due to the inability to 'burp' after surgery; and
- diarrhoea – relatively rare and the exact mechanism is unclear.

The quality dashboard provides an overview of activity commissioned by CCGs from the relevant pathways, and indicators of the quality of care provided by surgical units.

The quality dashboard is available via the Royal College of Surgeons website.

4 Levers for implementation

4.1 Audit and peer review measures

The following measures and standards are those expected at primary and secondary care. Evidence should be made available to commissioners if requested.

	Measure	Standard
Primary care	Assessment	Use of the GERDQ questionnaire before referral
	Referral	Appropriate lifestyle and medical therapy and review before referral
	Assessment	Ensure adequate balance of potential risks and benefits of endoscopy, manometry and pH tests before decision for intervention
	Intervention	Offer procedures with NICE recommendation. Do not offer untested procedures outside registered research trial
Secondary care	Assessment	Ensure adequate balance of potential risks and benefits of endoscopy, manometry and pH tests before decision for intervention
	Intervention	Offer procedures with NICE recommendation. Do not offer untested procedures outside registered research trial

4.2 Quality Specification/CQUIN

Measure	Description	Data specification (if required)
Length of stay	Provider demonstrates a median of two days	Data available from HES
Day case rates	Provider demonstrates a day case rate for anti-reflux procedure	Data available from HES

5 Directory

5.1 Patient Information for GORD

Name	Publisher	Link
Patient information	NHS Choices	http://www.nhs.uk/conditions/gastroesophageal-reflux-disease/pages/introduction.aspx
Acid reflux and oesophagitis	Patient.co.uk	http://www.patient.co.uk/health/acid-reflux-and-oesophagitis
Fight Oesophageal reflux together	FORT	http://www.fortcharity.org.uk
Heartburn and cancer awareness and support	HCAS	http://www.h-cas.org
GERD-Q questionnaire		http://www.soapnote.org/digestive-system/gerdq/

5.2 Clinician information for GORD

Name	Publisher	Link
GORD guidance (in development)	NICE	http://guidance.nice.org.uk/CG/Wave0/609

6 Benefits and risks of implementing this guide

Consideration	Benefit	Risk
Patient outcome	Ensure access to effective conservative, medical and surgical therapy	Unrecognised deterioration on conservative therapy
Patient safety	Reduce chance of missing oesophageal malignancy Reduce re-operations for reflux disease	
Patient experience	Improve access to patient information, support groups	Inappropriate or excess self-medication
Equity of access	Improve access to effective procedures	Unnecessary and ineffective surgery
Resource impact	Reduce unnecessary referral and intervention	

7 Further information

7.1 Research recommendations

- Use of GERD-Q score to guide referral and management

7.3 Evidence base

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7.4 Guide development group for GORD

A commissioning guide development group was established to review and advise on the content of the commissioning guide. This group met once, with additional interaction taking place via email and teleconference.

Name	Job title/role	Affiliation
Professor Stephen Attwood	Chair and Consultant General Surgeon	AUGIS
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- The Royal College of Surgeons of England and the Association of Upper Gastrointestinal Surgeons (AUGIS) of Great Britain and Ireland provided staff to support the guideline development.

7.6 Conflict of interest statement

Individuals involved in the development and formal peer review of commissioning guides are asked to complete a conflict of interest declaration. It is noted that declaring a conflict of interest does not imply that the individual has been influenced by his or her secondary interest. It is intended to make interests (financial or otherwise) more transparent and to allow others to have knowledge of the interest.

- There were no interests declared by the group.