

OESOPHAGEAL, GASTRIC AND GUT HEALTH

Prof John Reynolds – Consultant Oesophageal & Gastric Specialist

Dr Syed Anwar – Consultant Gastroenterologist

Ms Eleanor Faul – Consultant General & Colorectal Surgeon

Dr Barry Hall – Consultant Gastroenterologist

TOPICS

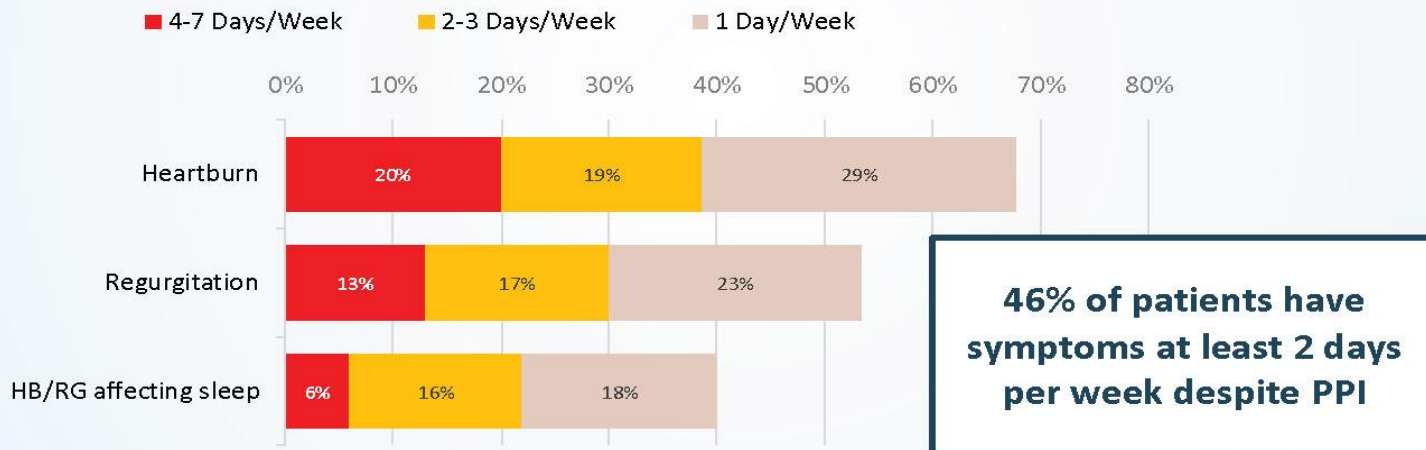
- Heartburn & Reflux: PPIs don't always get the job done!
- Dysphagia in the Young: A Pragmatic Guide for General Practice
- Constipation
- Gut health: Bloating, Belching and Abdominal pain

Heartburn and Reflux: PPIs don't always get the job done!

Prof John Reynolds – Consultant Oesophageal & Gastric Specialist

Inadequate symptom control on PPI: Fact or fiction?

- 333 patients from 16 GP practices:
 - Average duration of GERD: 8.58 years
 - Average duration of PPI therapy: 6.39 years
- GerdQ (# days with symptoms in the past week):



20% of patients are dissatisfied with their therapy!

Case Study 1

- 50 year old male / BMI 30 / Non diabetic
- 5 month history of severe heartburn, reflux and regurgitation
- Tried Omeprazole 20mg/d OTC ▶ mild impact on symptoms and quality of life
- Attended GP

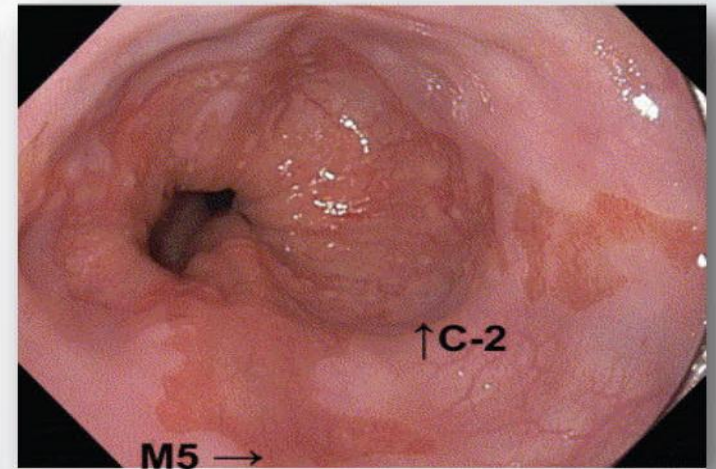
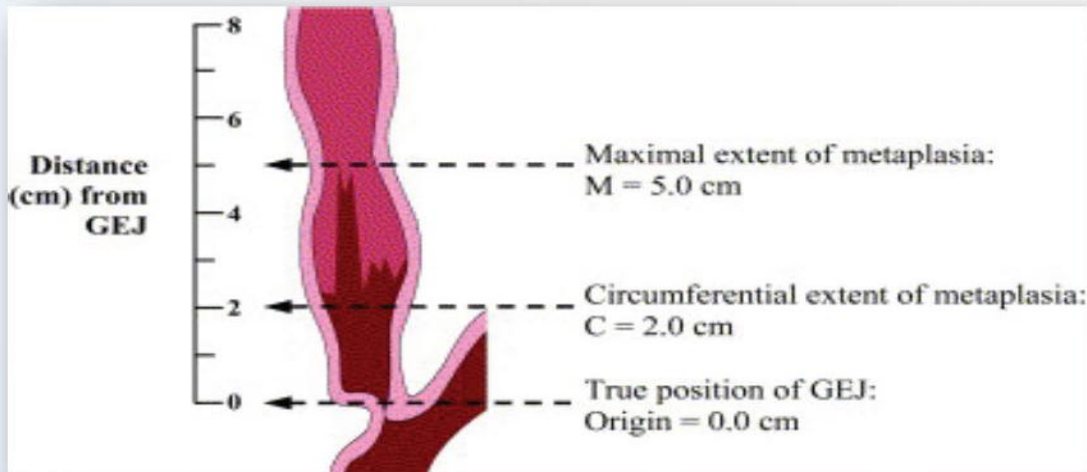
- 8 wk. course of Omeprazole 20 mg bd ▶ some improvement, but night-time heartburn persists & ongoing reflux & regurgitation
- **REMAINS SYMPTOMATIC ▶ ENDOSCOPY**

Barrett's esophagus

Prague C&M classification

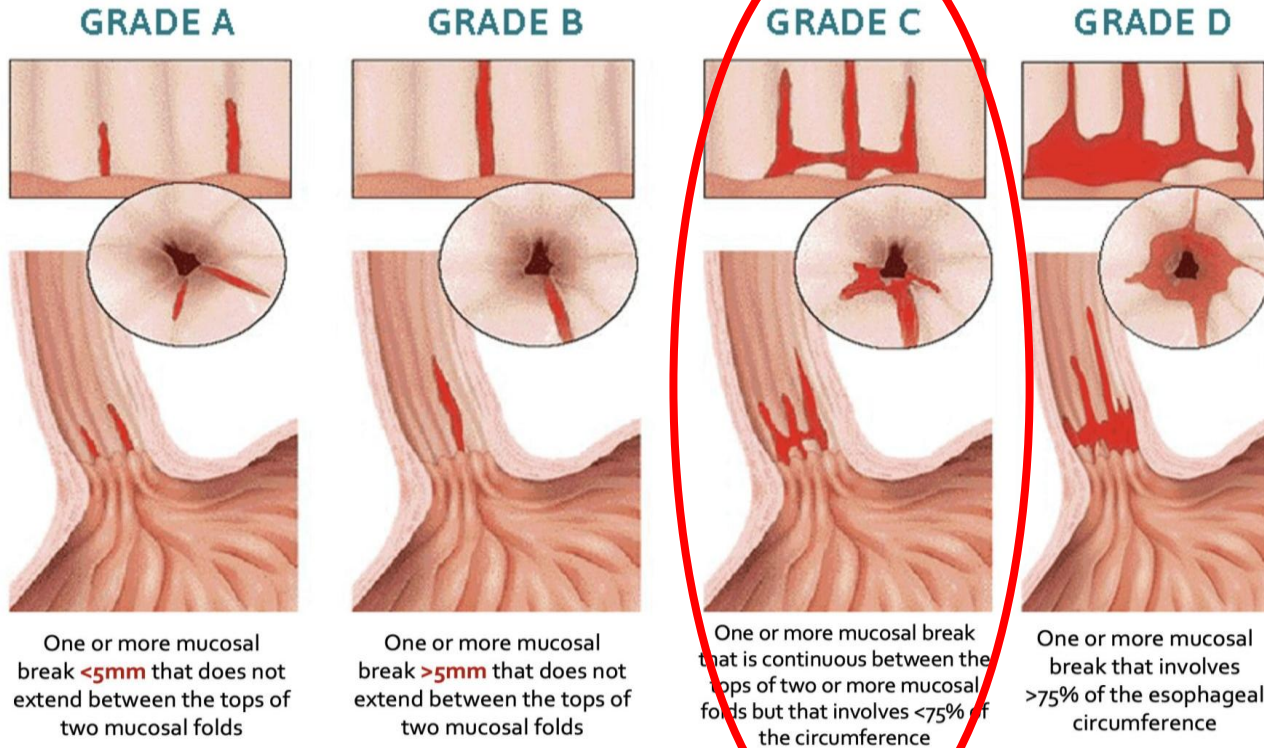
The Development and Validation of an Endoscopic Grading System for Barrett's Esophagus: The Prague C & M Criteria

PRATEEK SHARMA,^{*} JOHN DENT,[‡] DAVID ARMSTRONG,[§] JACQUES J. G. H. M. BERGMAN,[¶] LIEBWIN GOSSNER,^{||} YOSHIO HOSHIHARA,^{**} JANUSZ A. JANKOWSKI,^{**} OLA JUNGHARD,^{††} LARS LUNDELL,^{§§} GUIDO N. J. TYTGAT,[§] and MICHAEL VIETH^{¶¶}



Metaplastic changes < 1 cm excluded!

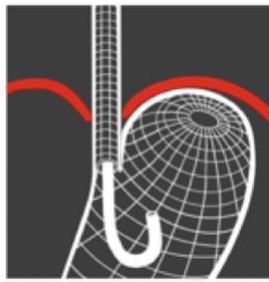
Los Angeles (LA) Classification of Reflux Oesophagitis



The American Foregut Society (AFS) Classification of Oesophago-Gastric Junction Integrity

Disruption:

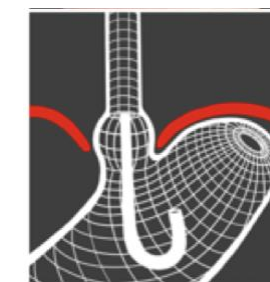
Grade 1
Intact



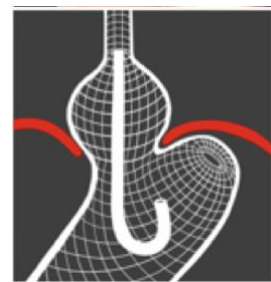
Grade 2
Partial



Grade 3
Moderate



Grade 4
Complete



Hiatal Hernia Length:
Hiatal Diameter:
Flap Valve:

0
Snug to scope
Present

0
Loose >1-2 Scope diameters (SDs)
Absent

0-2cm
2-3 SDs
Absent

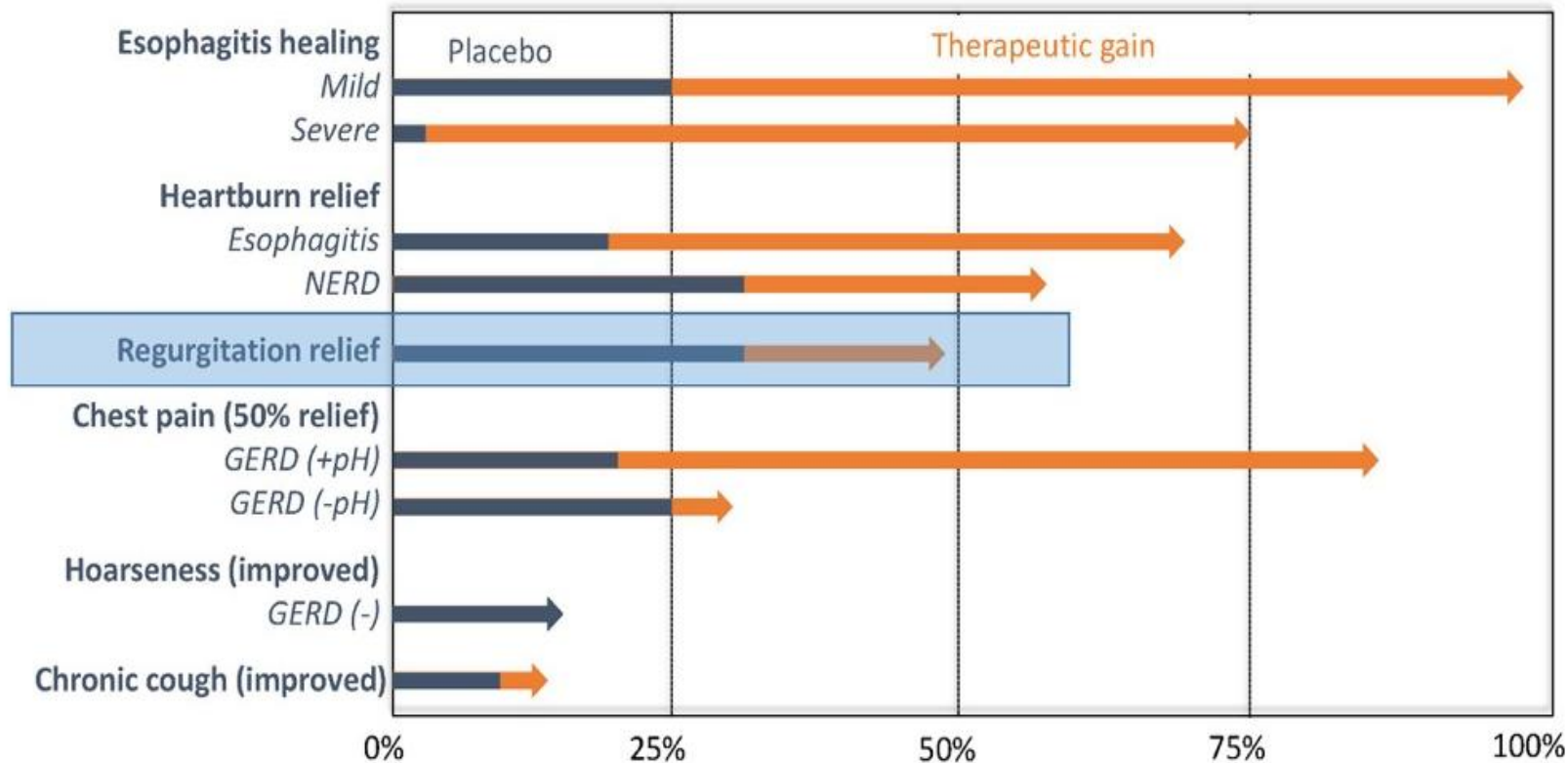
>2 cm
>3 SDs
Absent

Case Study 1 (cont.)

- 50 year old male / BMI 30 / Non-diabetic, no major co-morbidity
- 5 month history of heartburn and reflux
- Tried Omeprazole 20mg/d OTC ▶ mild impact on symptoms and quality of life
- 8 wk. course of Omeprazole 20 mg bd 6-8 wks ▶ some improvement, but night-time heartburn & reflux ++
- Weight reduction recommended: Do GLP-1 agonists have a role?
- REMAINS SYMPTOMATIC: ENDOSCOPY

- LA grade C oesophagitis; 3cm hiatus hernia; AFS Grade 4 ▶ proven pathological reflux disease
- Double-dose PPI trial? Trial of rabeprazole? (less CYP2C19 metabolism)
- Weight reduction - should we try a GLP-1 agonist?
- Adjuvant pharmacotherapy: Alginates with meals, Famotidine 20mg nocte?
- No major improvement: **Is repeat endoscopy required? Are pH studies required?**
- **How about laparoscopic anti-reflux surgery?**

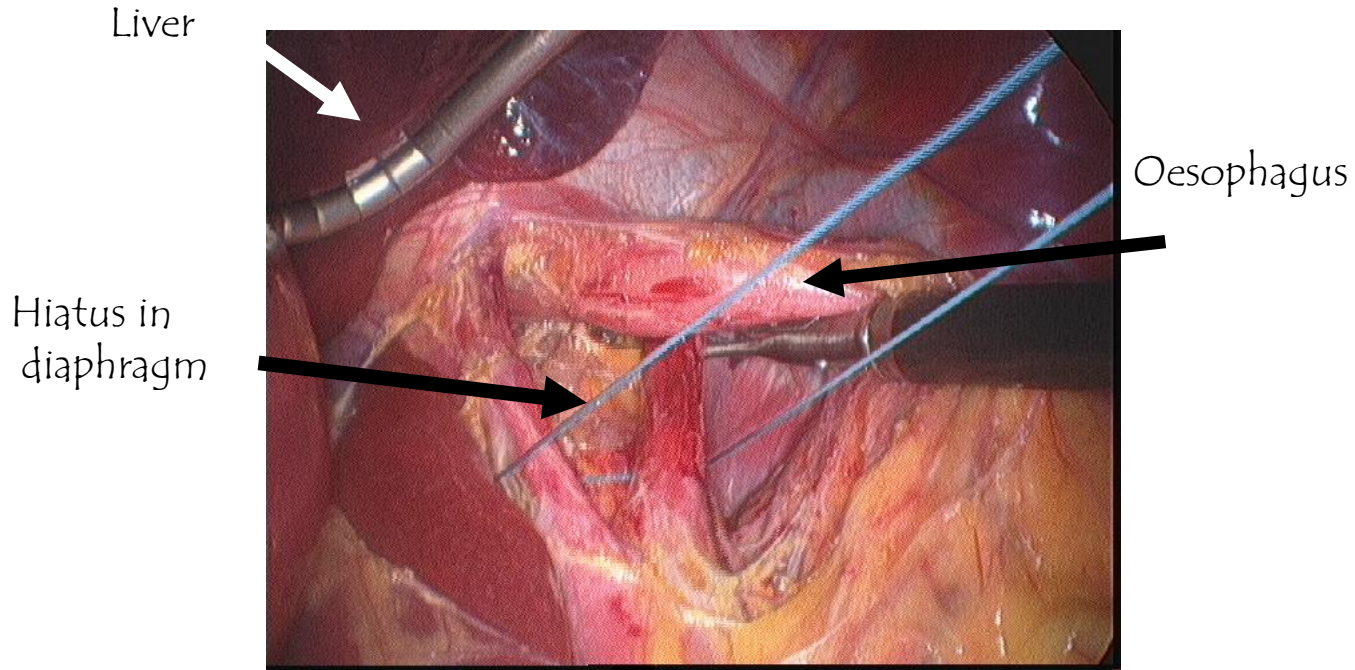
PPIs Deliver Minimal Therapeutic Gain for Regurgitation and EES



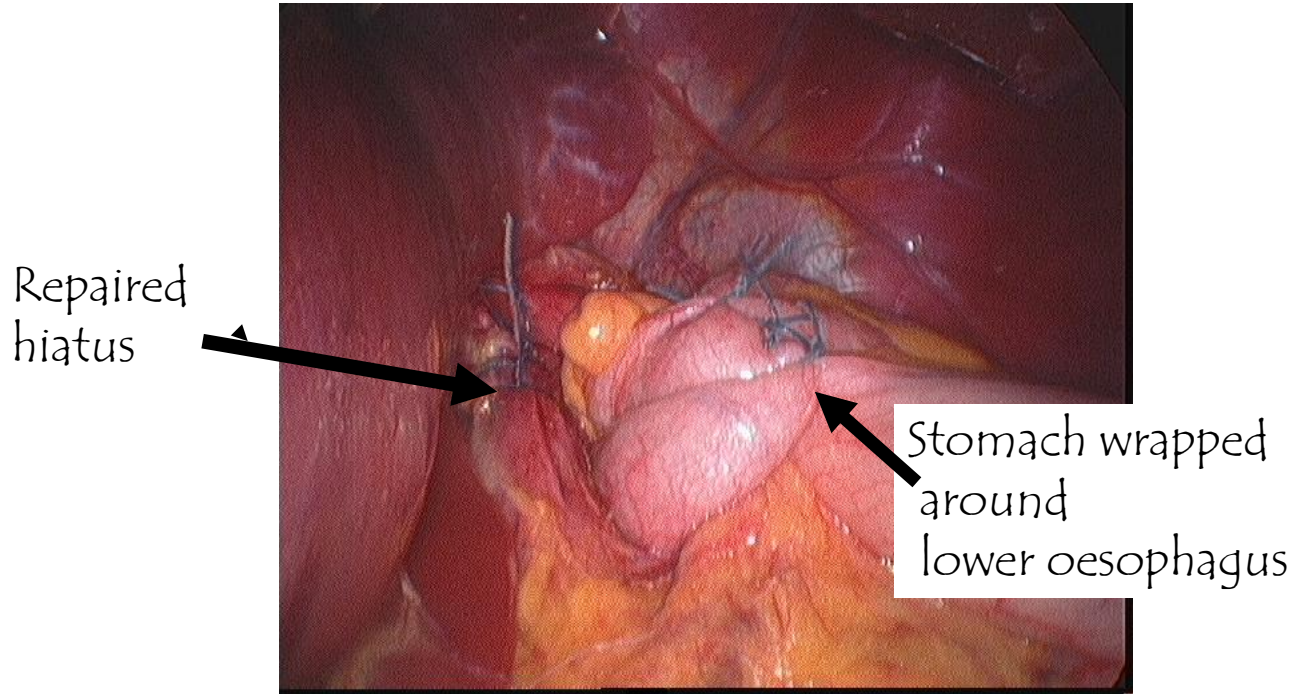
Kahrilas, Peter J., Guy Boeckstaens, and Andre JPM Smout. "Management of the patient with incomplete response to PPI therapy."

Best Practice & Research Clinical Gastroenterology 27.3 (2013): 401-414.

Repair of Hiatus Hernia



Laparoscopic Nissen Fundoplication



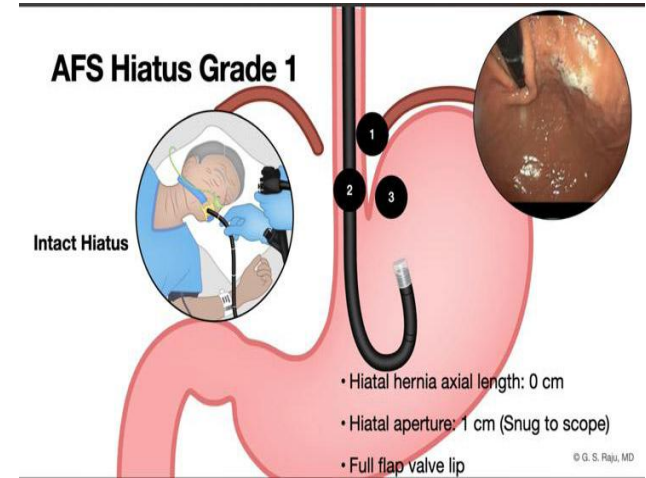
Anti-reflux Surgery Considerations in 2026*

- ▶ “Volume” reflux , in particular with disrupted OG junction (AFS Grade 3 or 4)
- ▶ Continued erosive oesophagitis despite max PPIs
- ▶ Symptomatic long-segment Barrett's oesophagus refractory to medical therapy
- ▶ Symptomatic large hiatus hernia (sliding \pm para-oesophageal)
- ▶ PPI intolerance or legitimate concerns re. side effects
- ▶ High volume surgeons/centres ONLY
- ▶ Caution with patient who has non-erosive reflux but wishes to be off meds
- ▶ Caution with patient who has predominant extra-oesophageal symptoms and no major oesophageal symptoms or evidence of pathologic reflux

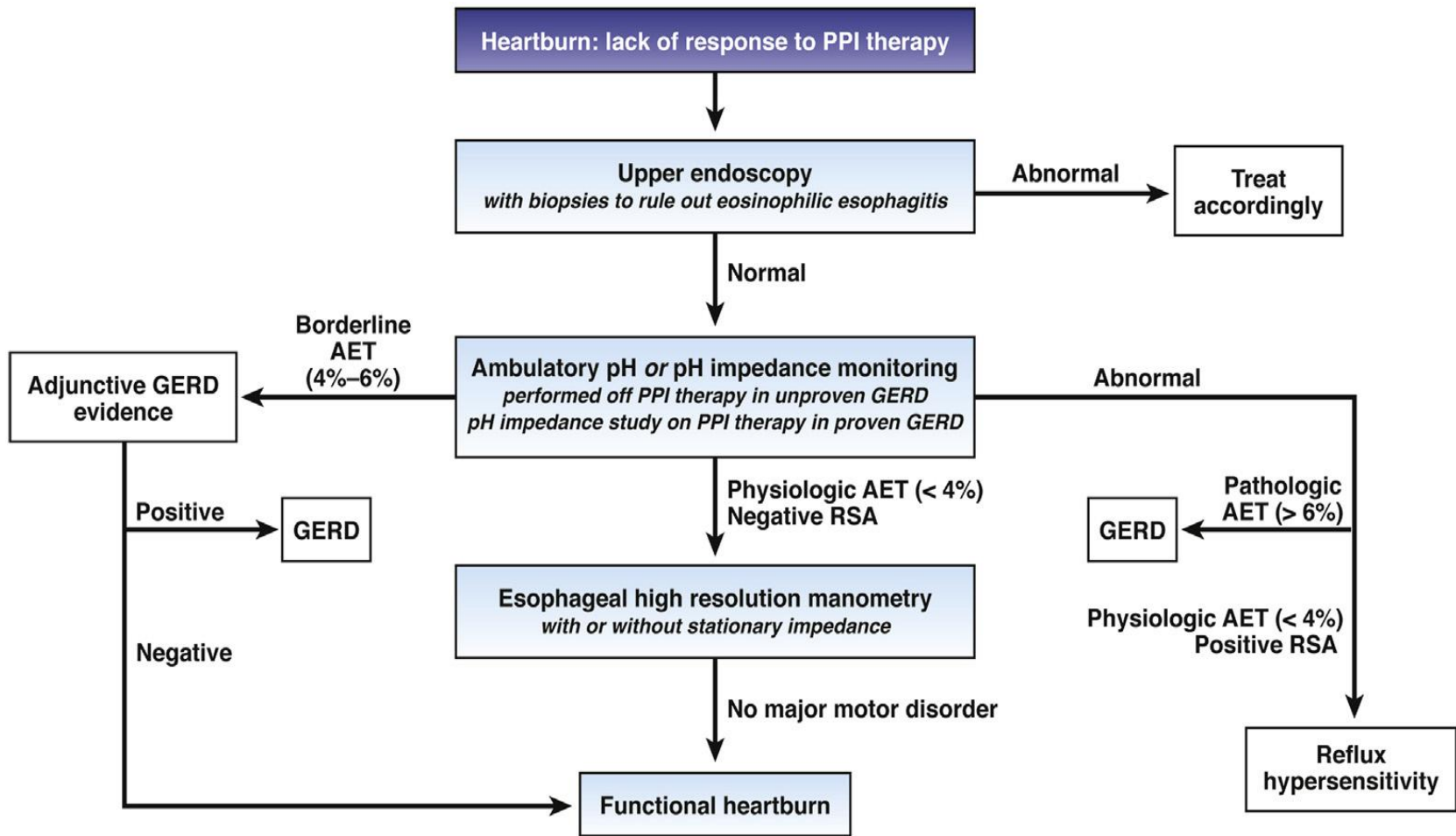
* Where surgery considered high resolution manometry imperative to ensure normal physiology

Case Study 2

- 50 year old female. BMI 24. No significant history.
- 5 month history of heartburn/chest pain only
- Tried Omeprazole 20mg/d OTC ▶ no effect
- GP prescribed 40mg/d esomeprazole x 6 wks, then bd x 8 weeks as no response
- **ENDOSCOPY off PPIs**



- Normal endoscopy, no hiatus hernia, AFS Grade I ▶ no endoscopic evidence of GERD
- Next step?
- 24hr Impedance/pH study : Acid Exposure Time < 4% (normal), no symptom association
- **FUNCTIONAL HEARTBURN**



AET, acid exposure time; RSA, reflux-symptom association; GERD, gastroesophageal reflux disease

Randomized Controlled Trials (RCTs) Of Neuromodulators In Functional Esophageal Disorders

Name	Class of drugs	Disorder	Dose	Response rate	Side effects
Imipramine ¹⁶¹	TCAs	NCCP	50 mg/d	52%	QT prolongation
Imipramine ¹⁶²	TCAs	NCCP	50 mg/d	Significant	Dry mouth, dizziness
Imipramine ¹⁶³	TCAs	FH, RH	25 mg/d	37.2%	Constipation
Amitriptyline ^{164,165}	TCAs	NCCP, globus	10,25 mg/d	52%, significant	Excessive sleeping, dizziness
Sertraline ¹⁶⁶	SSRIs	NCCP	50–200 mg/d	57%	Nausea, restlessness
Sertraline ¹⁶⁷	SSRIs	NCCP	50–200 mg/d	Modest	Dry mouth, diarrhea
Paroxetine ¹⁶⁸	SSRIs	NCCP	10–50 mg/d	Modest	Fatigue, dizziness
Paroxetine ¹⁶⁹	SSRIs	NCCP	10–50 mg/d	21.7%	None
Citalopram ¹⁷⁰	SSRIs	RH	20 mg/d	Significant	None
Fluoxetine ¹⁷¹	SSRIs	FH/RH	20 mg/d	Significant	Headache, dry mouth
Trazodone ¹⁶⁰	SRI	Dysmotility	100–150 mg/d	29%–41%	Dry mouth, dizziness
Venlafaxine ¹⁷²	SNRIs	NCCP	75 mg/d	52%	Sleep disturbances
Ranitidine ¹⁷⁶	H2RAs	FH	300 mg/d	Significant	None
Theophylline ¹⁷³	Adenosine antagonists	NCCP	200 mg twice per d	58%	Nausea, insomnia, tremor
Gabapentin ¹⁷⁴	GABA analog	Globus	300 mg 3 times per d	66%	None

FH, functional heartburn; GABA, gamma-aminobutyric acid; NCCP, noncardiac chest pain; RH, reflux hypersensitivity; SNRIs, serotonin-norepinephrine reuptake inhibitors; SRI, serotonin reuptake inhibitor; SSRIs, selective serotonin reuptake inhibitors; TCAs, tricyclic antidepressants.

Summary / Key Points

PPIs fail to provide complete symptom control in 20 to 40% of cases

Where dose-escalation fails, endoscopy off PPIs mandated to diagnose erosive disease, and to screen for Barrett's. If normal, then pH/impedance studies provide the precise diagnosis to guide treatment, especially of functional heartburn or hypersensitivity

Anti-reflux surgery or sphincter augmentation always a consideration for volume reflux in patients with a disrupted hiatus (AFS Gr 3 or 4) and pathologic evidence of reflux (LA Grade B,C,D; Barrett's; or peptic stricture) who do not respond to PPI \pm adjunctive therapies

Reflux Disease is not "One Size Fits All". **Precision Medicine** increasingly requires a clear diagnosis – hence pH-impedance testing an emerging requirement to aid patient-specific prescribing and de-prescribing and appropriate longer- term plan in follow-up.

“Dysphagia in the Young (DIY)”

A Pragmatic Guide for General Practice

Dr Syed Anwar – Consultant Gastroenterologist

Outline

- Case Study-1
- Case Study-2
- Endoscopic Findings
- Eosinophilic Oesophagitis (EoE)
- Immunological Process
- Symptoms
- Investigation
- Management
- BSG Guidelines
- Key Takeaway / Summary



Case Study-1

- **Case:**
 - 42 year old male having sensation of food sticking in his chest after meals for 3 months
- **Symptom:**
 - Young adult with intermittent dysphagia to solids.
- **History:** Asthma.
- **Examination:** Routine labs were normal
- **Likely Diagnosis:** Eosinophilic Esophagitis

Case Study-2

- **Case:**
 - 37 year old male presented to ED in Beacon. Not able to swallow his saliva or water after he had lunch in a restaurant.
- **Symptom:** Acute intermittent dysphagia to solids.
- **History:** None
- **Examination:** Routine labs & CXRs were normal
- **Likely Diagnosis:** Consider food bolus obstruction because of EoE

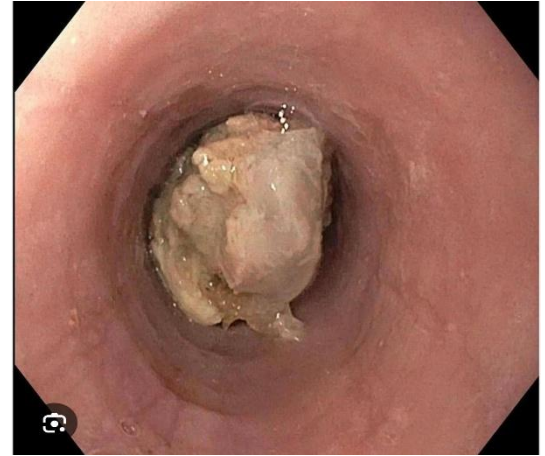
Endoscopic Findings



Normal



Case 1: EoE

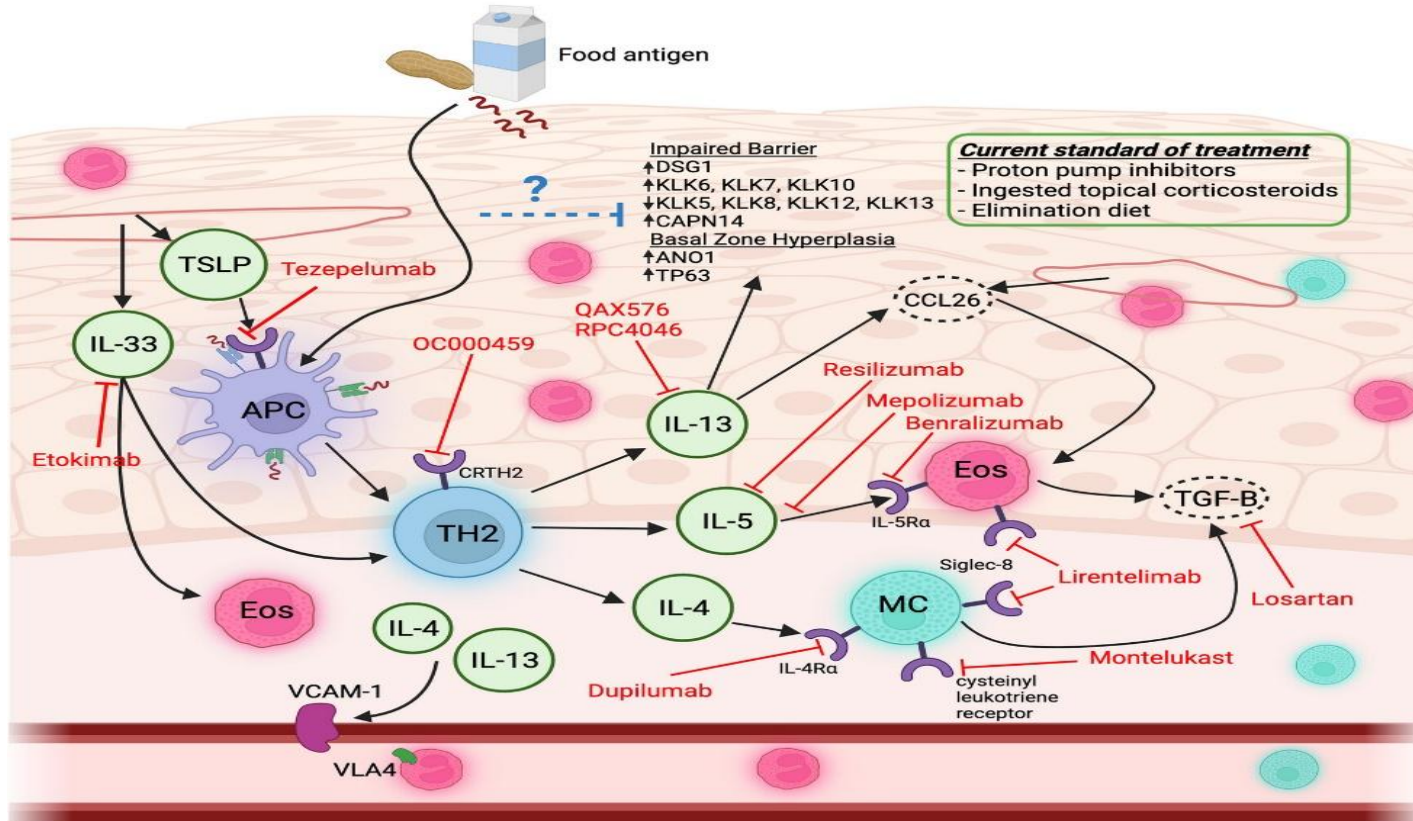


Case 2: Complication of EoE

Eosinophilic Oesophagitis (EoE)

- Eosinophilic Oesophagitis (EoE) is a chronic, **immune/antigen mediated** oesophageal disease defined by clinical symptoms of oesophageal dysfunction and histology showing eosinophilic predominant inflammation. This causes structural changes in the esophagus, which in turn leads to dysphagia (difficulty swallowing)
- **Incidence:** 13 cases per 100,000
- **Gender:** Male > female.
- **Age:** Common between 18 to 65 years of age.
- **Ethnicity:** White > Asian or Africans.
- **Risk Factors:** First degree relatives and twins.
- **Atopic co morbidities:** Food allergy, asthma, allergic rhinitis, allergic dermatitis. (IgA involvement).
- **Genes:** CAPN14, CCL26.

EoE: Immunological Process



Symptoms of EoE

Young Adults & Adults

- Dysphagia
- Sticking sensation of food in chest
- Regurgitation

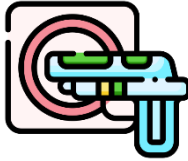


Children

- Vomiting
- Abdominal pain
- Feeding difficulties
- Failure to thrive



Investigation



- **Endoscopy:**
 - Macroscopic features.
 - Take six biopsies at three different levels.

- **Histology:**
 - Eosinophilic count > 15/HPF.
 - Basal cell hyperplasia.
 - Eosinophilic micro-abscess.

- **I- SEE Score:**

Management: 3Ds Plan (*Drugs, Diet, Dilation*)



- **Drugs: PPI or STC**
 - Topical swallowed corticosteroids-Fluticasone inhaler, oral viscous budesonide).
 - Biologics-Dupilumab (Anti IL-4 receptor antagonist).
- **Diet: Elimination Diet**
 - Milk, egg, wheat, soy, nuts, fish/shell fish.
 - Six food elimination diet, four food elimination diet and two food elimination diet.
- **Dilation: Mechanical Dilation**
 - Balloon.
 - Bougie cap.



Treatment Options



PPI

- **First line treatment**
- **Long track record and cheap**
- **Anti secretory and anti inflammatory effect**
- **Histological remission 60%**

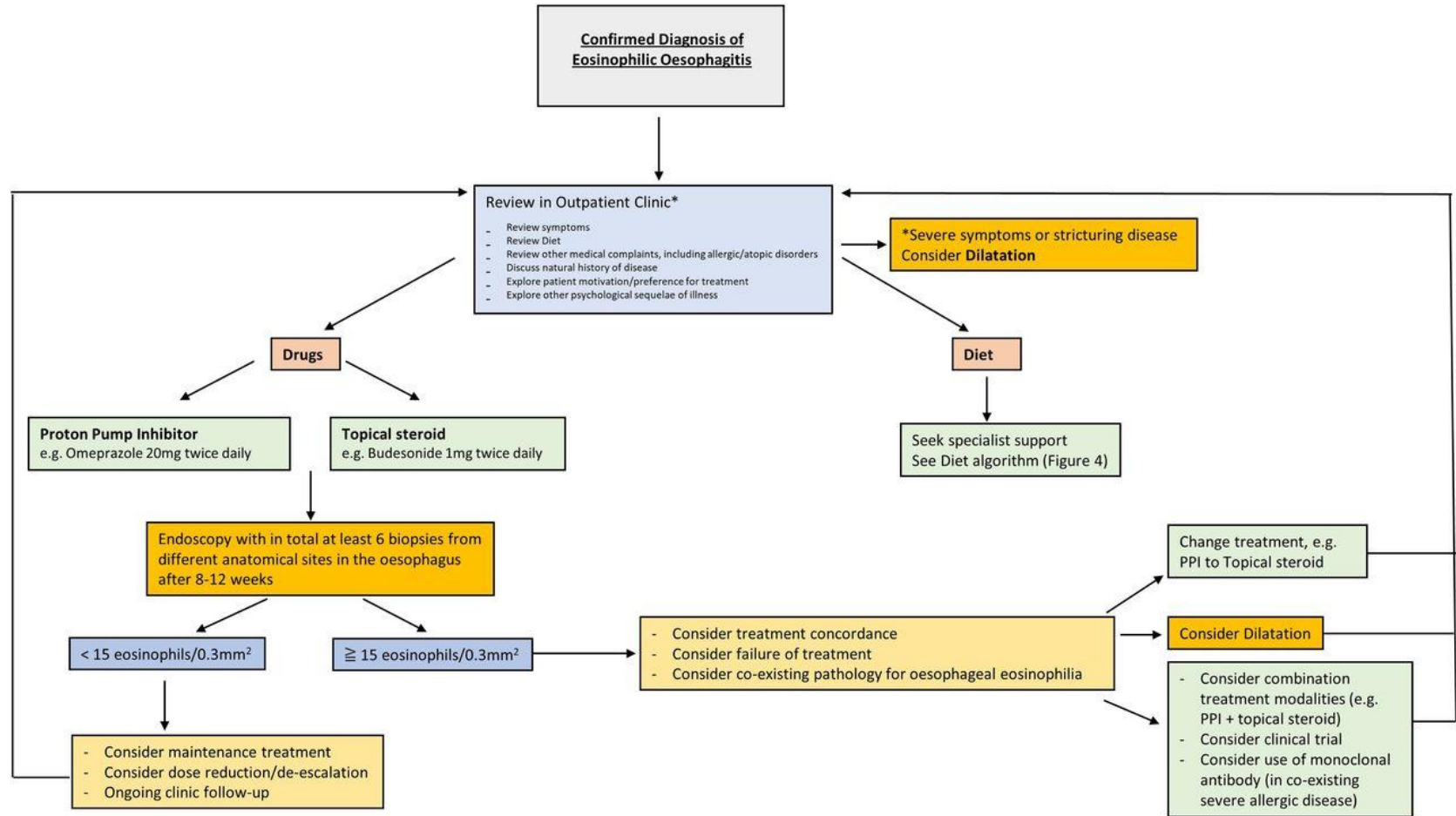
STC

- **Locally acting steroid**
- **Fluticasone and Budesonide (Jorveza 1mg)**
- **Safe in long term**
- **Histological remission 90%**

Management: Drugs (PPI vs STC)

	PPI Proton Pump Inhibitors	STC Swallowed Topical Steroids
Controlled Clinical Trials	(+)	++(+)
Observational Studies	++	++
Experience (Clinical Track Record)	+++	+++
Efficacy	+(+)	+++
Rapidity of Onset	+(+)	+++
Long-term Data / Experience	+(+)	++
Availability, Reimbursement	+++	+(+)
Costs	+++	+(+)
Effectiveness in Advanced Stages (Fibrosis)	(+)	++
Safety	++(+)	++(+)

BSG Guidelines



Key Takeaways

- Eosinophilic oesophagitis is increasingly common
- Dysphagia in young-Could be EoE.
- Early referral prevents complications
- Don't diagnose EoE with a trial of PPI.
- PPI and STC are safe in long term.
- I-See score to assess severity of disease.

Constipation

Ms Eleanor Faul – Consultant General & Colorectal Surgeon

Case Study 1

A 34 year old woman, in army

Presents with constipation for 3 years

1 bowel movement every 5 days

No meds. Takes fibre and fluid

Used OTC laxatives without improvement

Conversation starter: What is normal?



Slow Transit

- Diffuse markers remain in colon beyond 5 days
- Moderate fibre – soluble
- Fluids
- Exercise
- Normalise habit
- Stimulant laxatives
- Avoid long-term senna

Considerations

Childhood constipation?

Chronic pseudo-obstruction. Delayed Dx

Check TFTs, Ca, Meds, diet

Hypothyroidism; Hypocalcaemia/hyperparathyroidism; Opiates; Buscopan; eating disorder or dysregulated eating; GLP 1 receptor agonists

?fissure/trauma

Fissure in ano; Haemorrhoidectomy; Adverse life events.

Behavioural/Toileting issues

Time-poor; inadequate facilities; anxiety at work?

Transit vs Evacuatory

Differentiate to treat effectively

Where is the problem?

Gastrocolic reflex

Pan GI transit

Stimulation

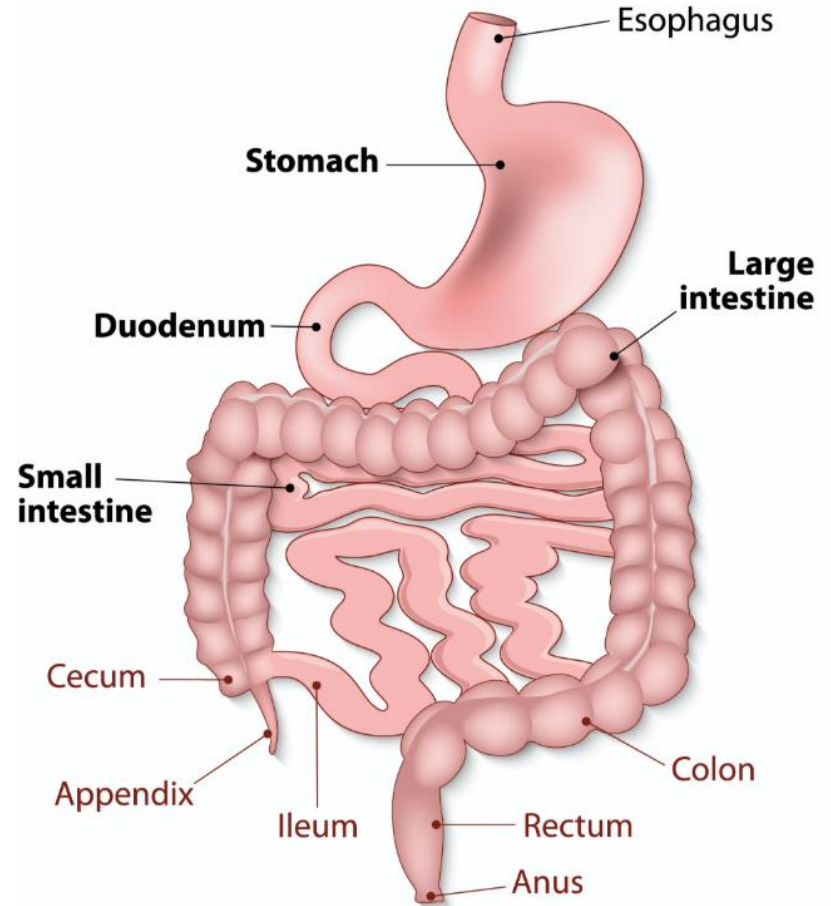
Slow colonic transit

Long colon (stretched longitudinal muscle)

Stool consistency

Reservoir

Reservoir emptying



Case Study 2

56 year old woman, presents with 2 year history of constipation.

1 bowel movement every week.

Needs manual evacuation.

Now some minor incontinence.

Need to ask the difficult questions!



Obstructed Defecation

- Markers showing normal transit but accumulation in pelvis?
- Sensation?
- Digitation?
- Gastrocolic reflex?
- Position/splinting
- Behaviour
- Biofeedback?

Faecal Incontinence

R/O pathology

Overflow

Stool consistency

Puborectalis

Anal sphincter

Pudendal neuropathy

Assessment

How long?

Wexner incontinence score

Hx of trauma or surgery

Obstetric history

Diet history

Examination

Consistency is important

Often addressing this is enough

With the best muscle in the world and food poisoning....

Potential Causes

Questions should address potential causes:

- Anal sphincter weakness
- Rectal capacity disturbances
- Peripheral neuropathy
- Central nervous system problems
- Behavioural
- Diarrhoea or overflow

Gut Health: Bloating, Belching and Abdominal Pain

Dr Barry Hall – Consultant Gastroenterologist

“Intestines are comparable to a jester, who unless gravely insulted remains equitable.”

John Moir, Scottish Physician. 17th Century.

A Definition of Gut Health

“A state of normal gastrointestinal function without active gastrointestinal disease and gut-related symptoms that affect quality of life”.

International Scientific Association for Probiotics and Prebiotics Consensus

The ISAPP Consensus on Gut Health

A 13-expert global panel convened to standardise the definition and framework for gut health, establishing a formal definition and a physiological framework across six functional domains for clinical and research use

Defining Gut Health & Clinical Norms

The Official Consensus Definition

A state of normal gastrointestinal function without active disease or symptoms effecting quality of life.

Health During Pathological Remission

Individuals with chronic diseases (e.g., IBD) can experience gut health during periods of remission.

The Threshold of "Significant" Symptoms

Occasional transient symptoms are normal; health loss occurs when symptoms impact daily living.

Normal Clinical Markers for Bowel Function



Stool Frequency:
Between three times per day and three times per week



Spontaneous Movements:
3 to 21 complete, satisfactory bowel movements per week



Stool Consistency:
Types 3, 4, or 5 on the Bristol Stool Form Scale

The Six Functional Domains



Digestive Physiology
The gut secretes 7L of fluid daily, but only 100ml is typically lost in stool



Microbiome
While critical, current microbiome analysis cannot yet provide a meaningful, individualised index of health



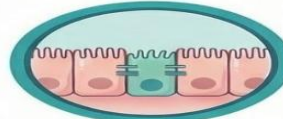
Endocrine Function



Gut-Brain Axis
Two-way communication between the central and enteric nervous systems influencing mood and motility



Immune System



Epithelium

Case Study

23 year old female medical student.

BgHx: Irritable bowel syndrome (constipation sub-type) diagnosed in secondary school.

PC: 6 month history of burning abdominal pain and nausea after eating. Associated bloating.

Viral infection during hospital rotation 7-8 months ago. No vomiting. No change in bowel habit.

Has stopped playing sports and socialising due to symptoms.

Case Study

Blood tests (including coeliac screen) and faecal calprotectin are normal.

Symptoms unresponsive to probiotic and Mebeverine.

Hydrogen breath test positive for SIBO (patient self-referred for test)

Limited response to 2 courses of rifaximin.

Next steps and differential diagnosis?

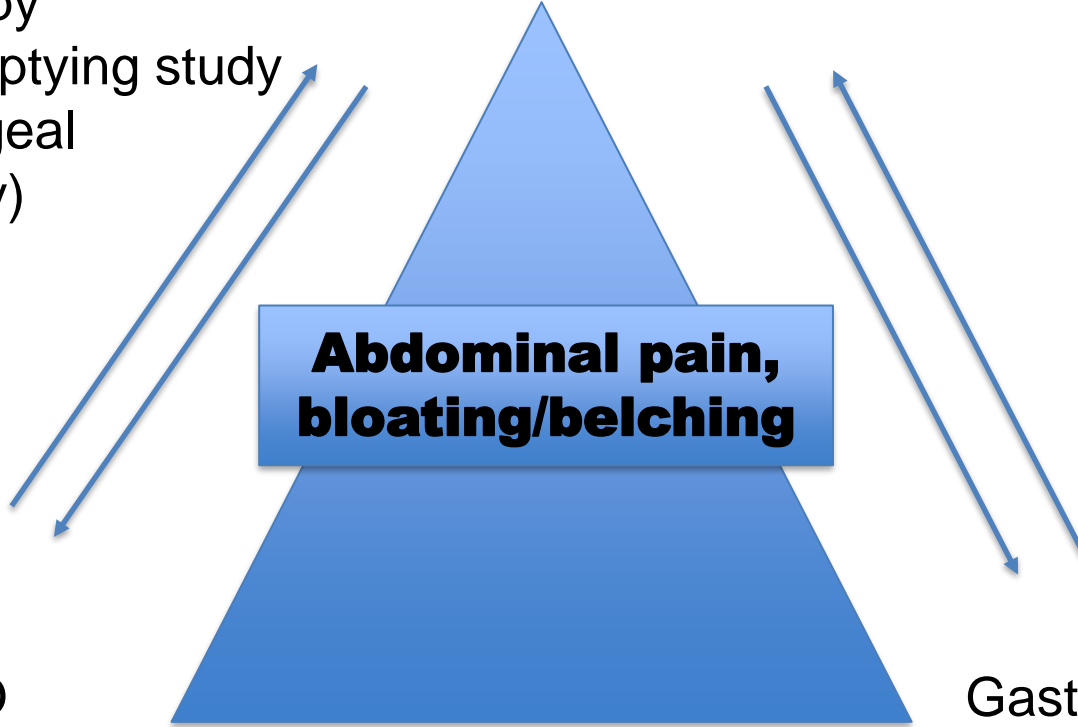
- Gastroscopy
- Gastric emptying study
- (Oesophageal manometry)

Functional
Dyspepsia

**Abdominal pain,
bloating/belching**

SIBO

Gastroparesis/
Dysmotility



Pathophysiology of Gastric Neuromuscular Disorders (GND)

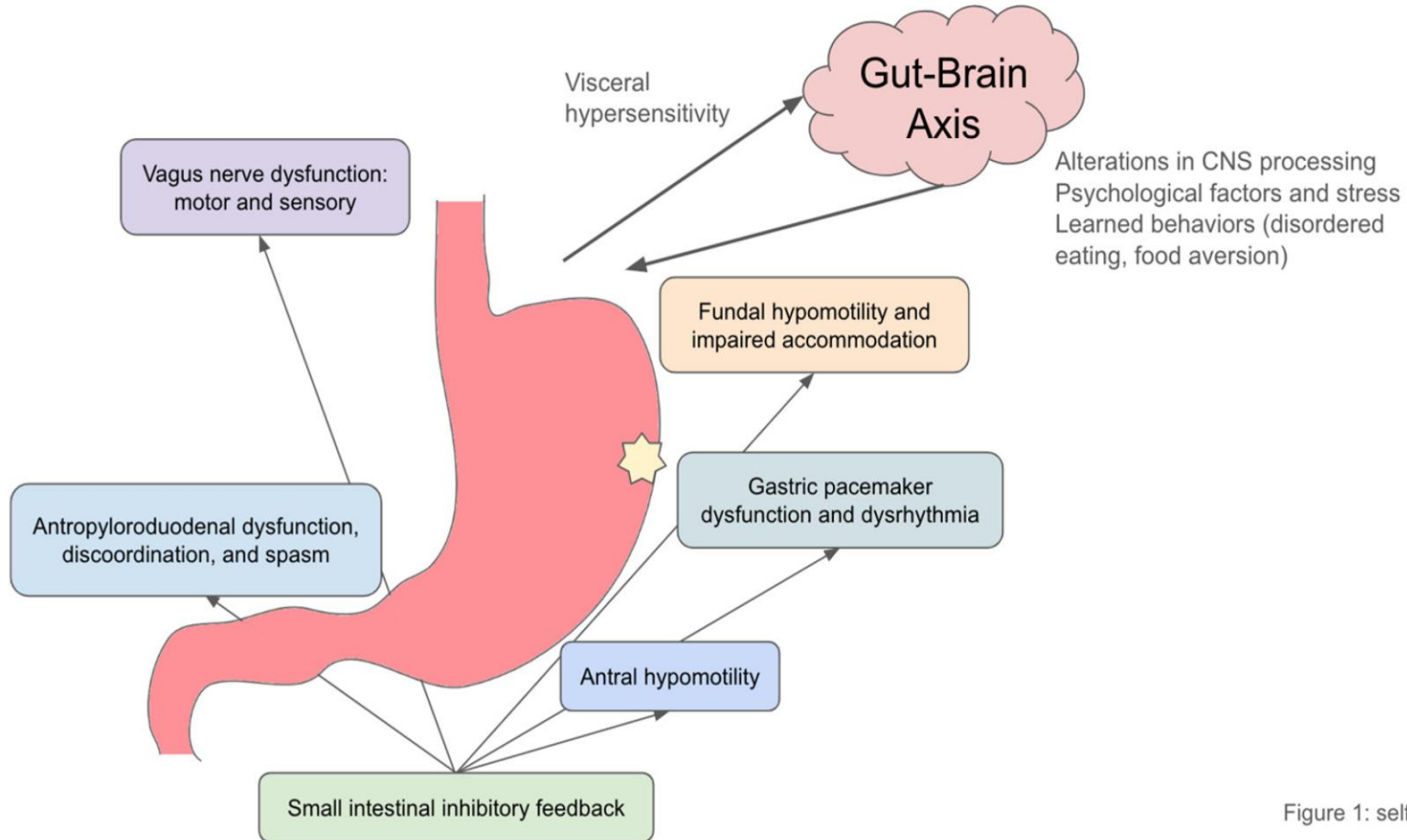
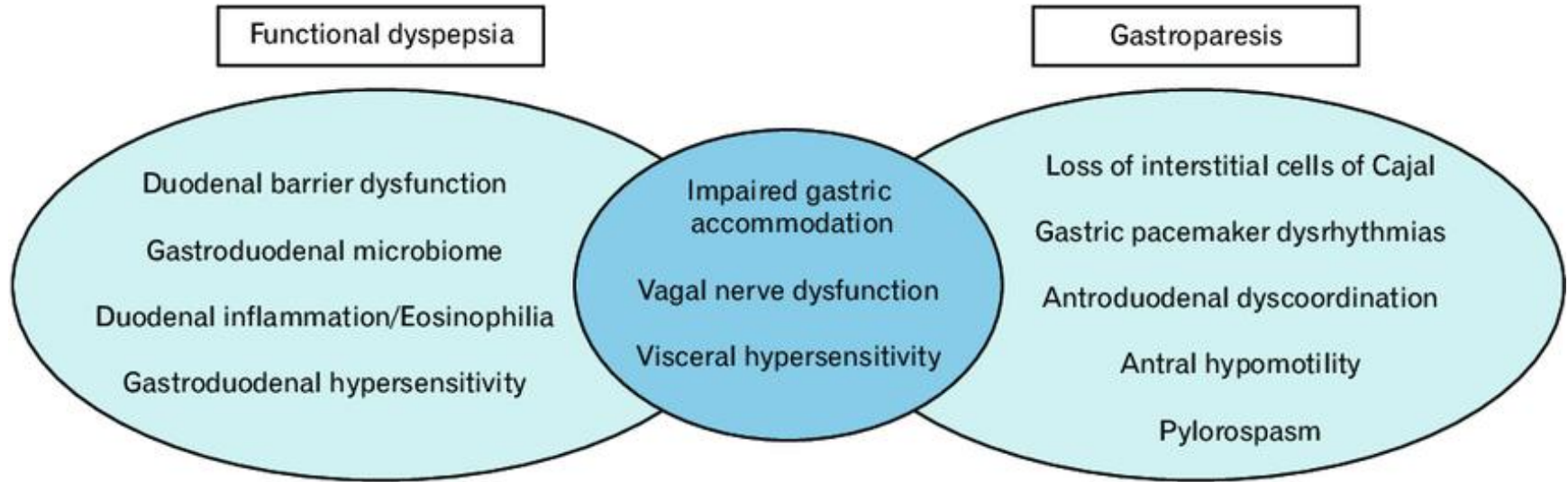
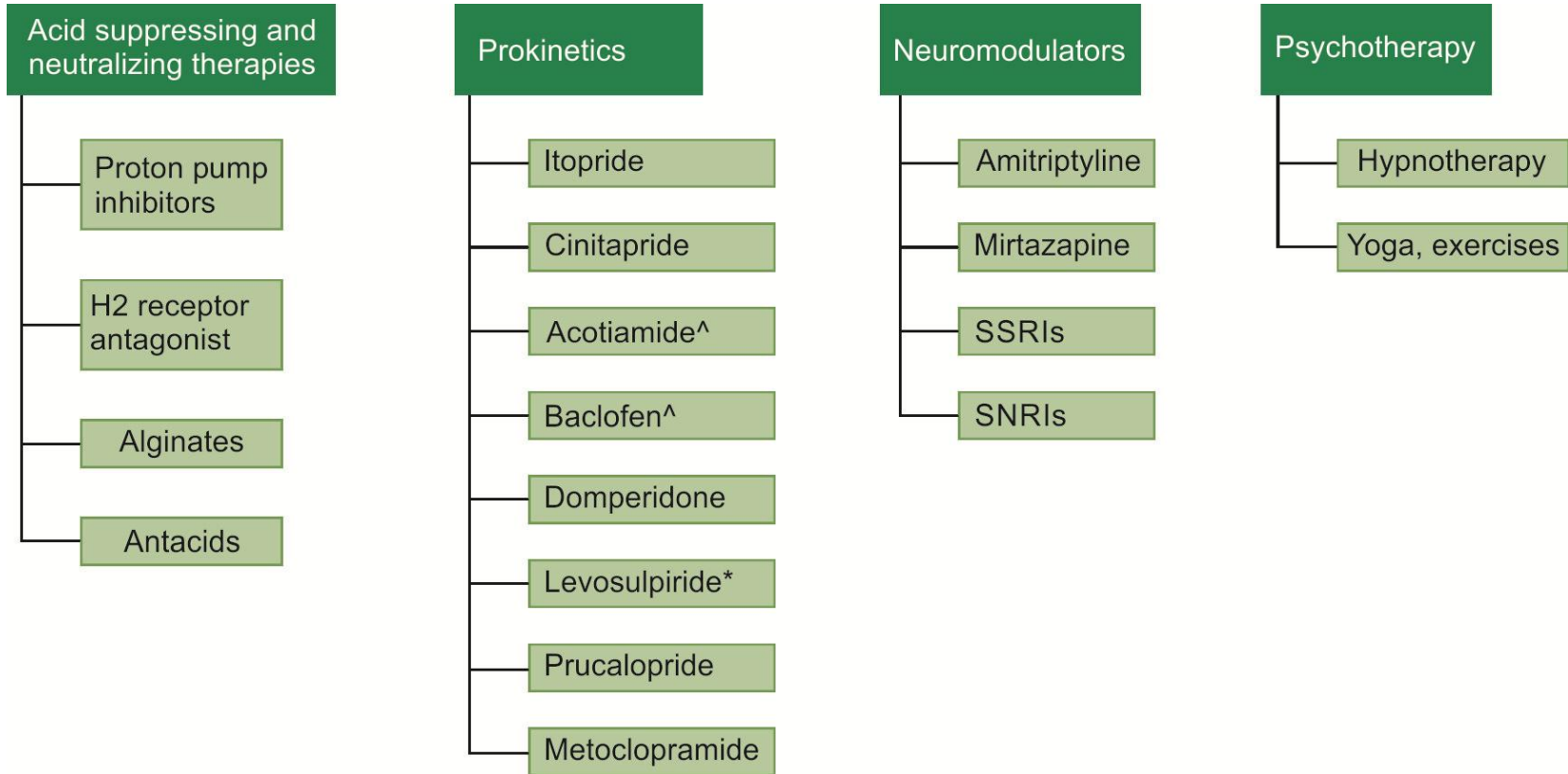


Figure 1: self created

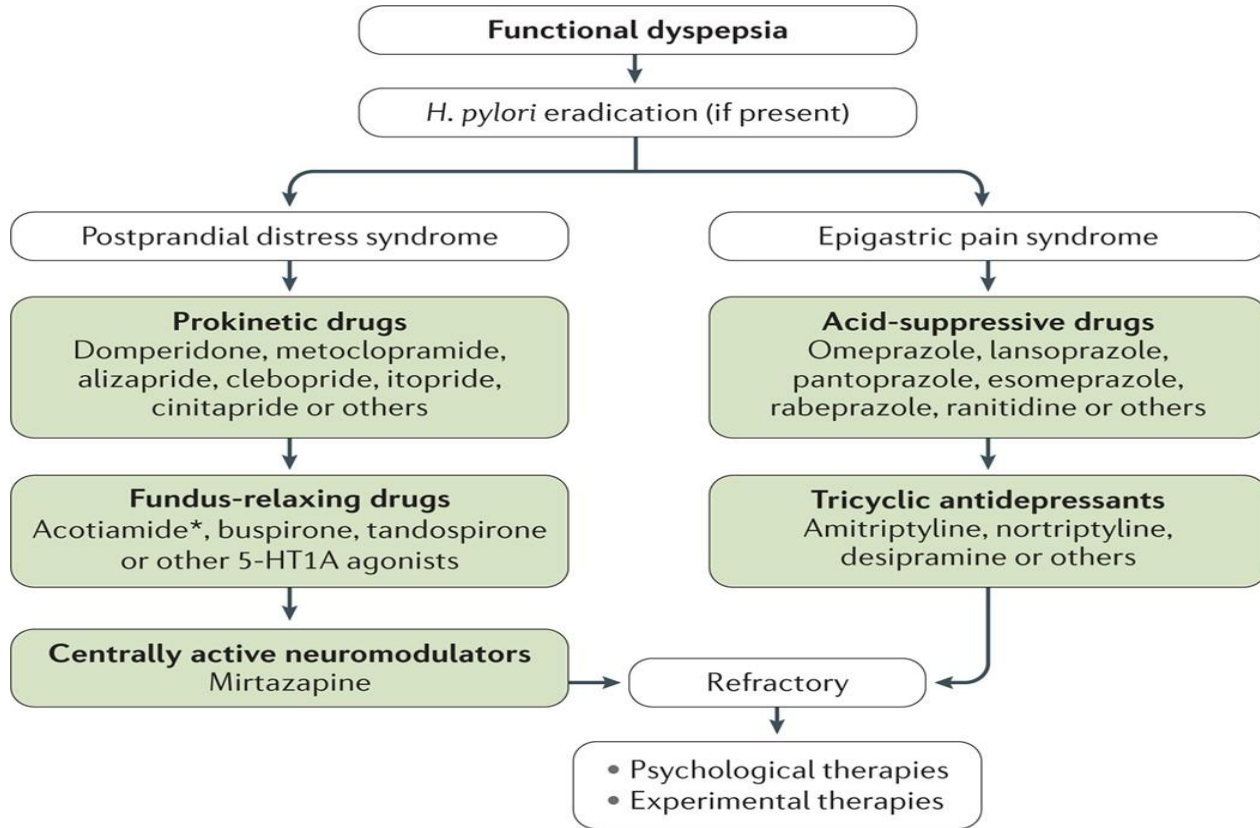
One and the same or separate entities?



How to treat?



How to treat?



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Thank you