Management of GORD

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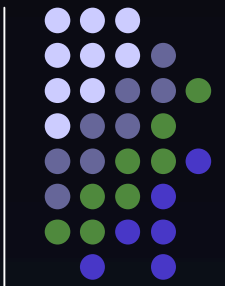
Topics

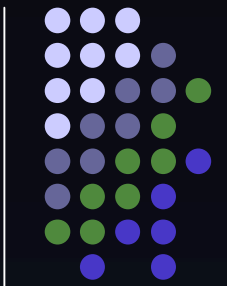
- Case 1
  - Management of GORD
- Case 2
  - Indications for endoscopy/referral
  - Complications of GORD
  - Barrett’s oesophagus
  - Helicobacter pylori
- Case 3
  - Functional dyspepsia

Case 1: Amanda



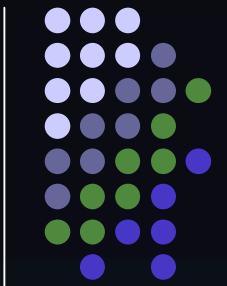
- 34 year old woman
- Visits GP because of ‘terrible heartburn’
  - Retrosternal burning everyday for 6 months
  - Occasional acid reflux into mouth
  - Can disrupt sleep
  - Persistent dry cough
  - No haematemesis/melaena
  - No abdominal pain
  - No weight loss
  - No dysphagia

Case 1: Amanda



- No medical history
- No family history
- Non-smoker, binge drinks in weekend
- Examination
  - BMI 31
  - No pallor
  - Abdominal examination normal

Case 1: Amanda

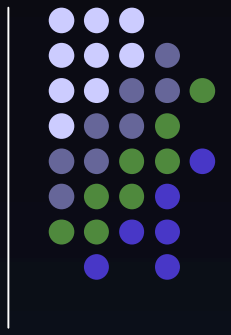


- Diagnosis
  - Amanda most likely has gastro-oesophageal reflux disease

Definition of GORD

- GORD
  - Heartburn: burning sensation in retrosternal area
  - Reflux: perception of flow of refluxed gastric content into the mouth or hypopharynx
  - GORD occurs when the reflux of stomach contents causes troublesome symptoms or complications
  - Significant impairment of QOL usually occurs when symptoms occur on ≥ 2 days /week

GORD Symptoms



- Most frequently experienced symptom of GORD
  - Retrosternal burning or heartburn
  - 86% of patients in general practice

Jones et al; 1995

- 65% of adults suffer from heartburn
  - 15% longer than 10 years

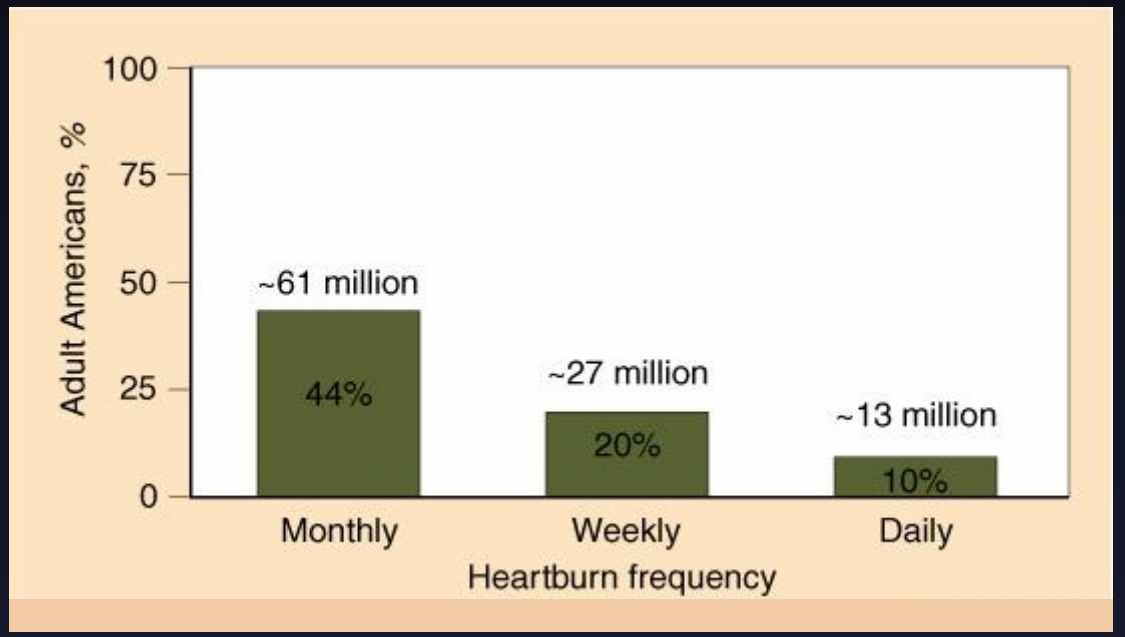
Glise; 1995

- 34% of patients visiting their general practitioner have heartburn for > 3 months

Corder et al; 1996

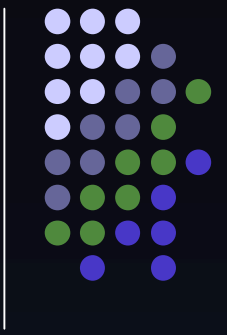
GORD Symptoms

- 15-20% of adults experience heartburn at least once/wk



Nebel OT, Fornes MF, Castell DO. Symptomatic gastroesophageal reflux: incidence and precipitating factors. Am J Dig Dis. 1976;21:953

Case 1: Amanda



Amanda mentioned a persistent cough. Is this likely to be related to reflux?

- Yes
- No

What are the extra-oesophageal symptoms that can be cause by gastro-oesophageal reflux?

GORD

Oesophageal Syndromes		Extra-oesophageal syndromes
Symptomatic syndromes	Syndromes with oesophageal injury	Established associations
Typical reflux syndrome Reflux chest pain syndrome	Reflux oesophagitis Reflux stricture Barrett's oesophagus Oesophageal adenocarcinoma	Reflux cough syndrome Reflux laryngitis syndrome Reflux asthma syndrome Reflux dental erosion syndrome

Symptom Assessment

- Heartburn
- Regurgitation
- Excessive belching, waterbrash
- Quality of life
- Atypical symptoms
  - Chest pain, cough, sore throat, hoarseness, wheeze

Question

- What are the alarm symptoms?
    - Dysphagia
    - Bleeding or iron deficiency anaemia
    - Odynophagia
    - Weight loss

Differential Diagnosis

- GORD
- Peptic ulcer disease
- Impaired gastric emptying
- Functional / non-ulcer dyspepsia
- Also
  - Infectious oesophagitis
  - Pill oesophagitis
  - Biliary tract
  - Oesophageal dysmotility
  - Coronary artery disease

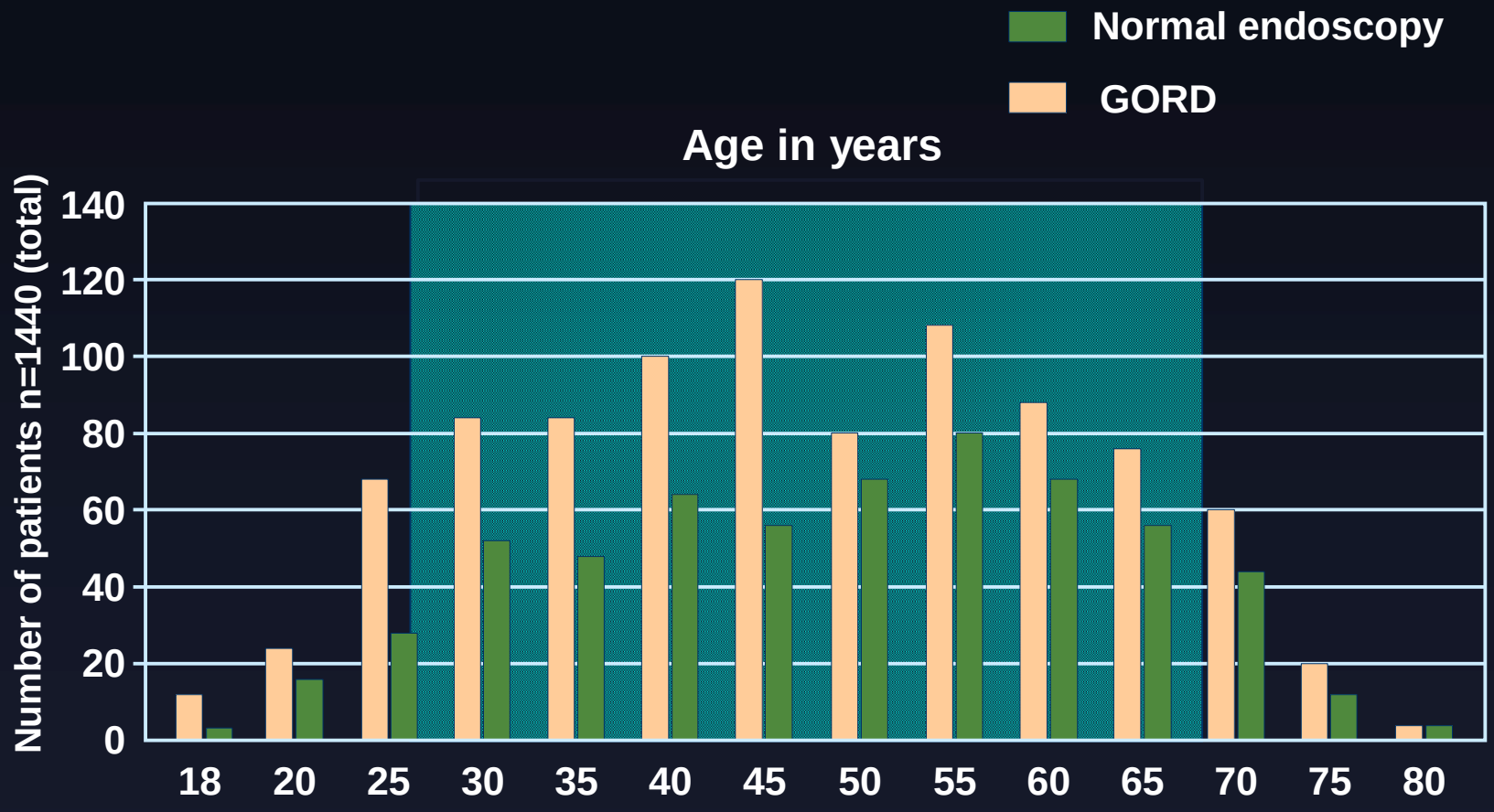
Question

- What are Amanda’s risk factors for reflux?

Risk Factors

- Obesity
- Alcohol consumption (>7 STD drinks/wk)
- Hiatal hernia
- First-degree relative with GORD
- Scleroderma
- Institutionalised or intellectually handicapped
- Patients nursed in supine position for extended period of time
- Medications: Fosamax

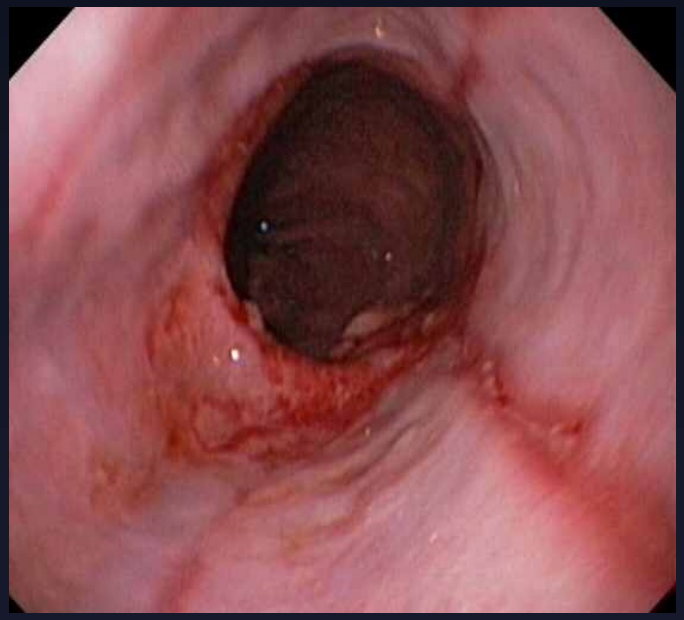
Age Range of Patients with Reflux Oesophagitis

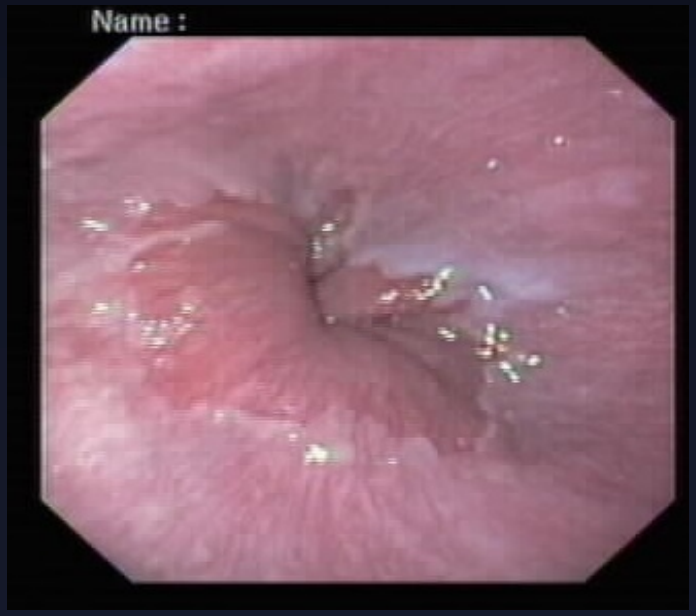


Smout; 1997

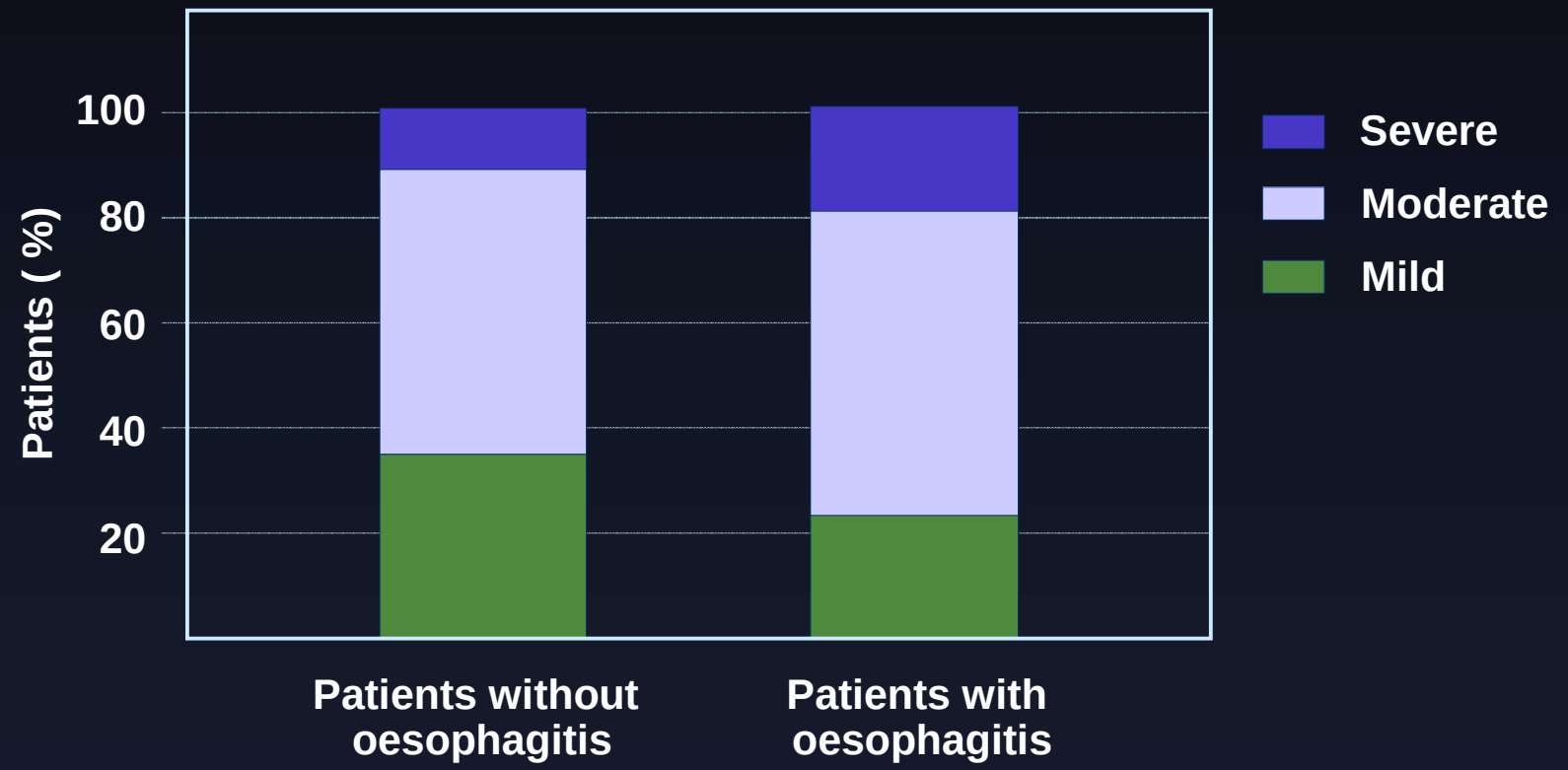
Spectrum of GORD

- Oesophagitis in 30-40%
  - Complications in 5%
- Non-erosive reflux disease (NERD) in 60-70%



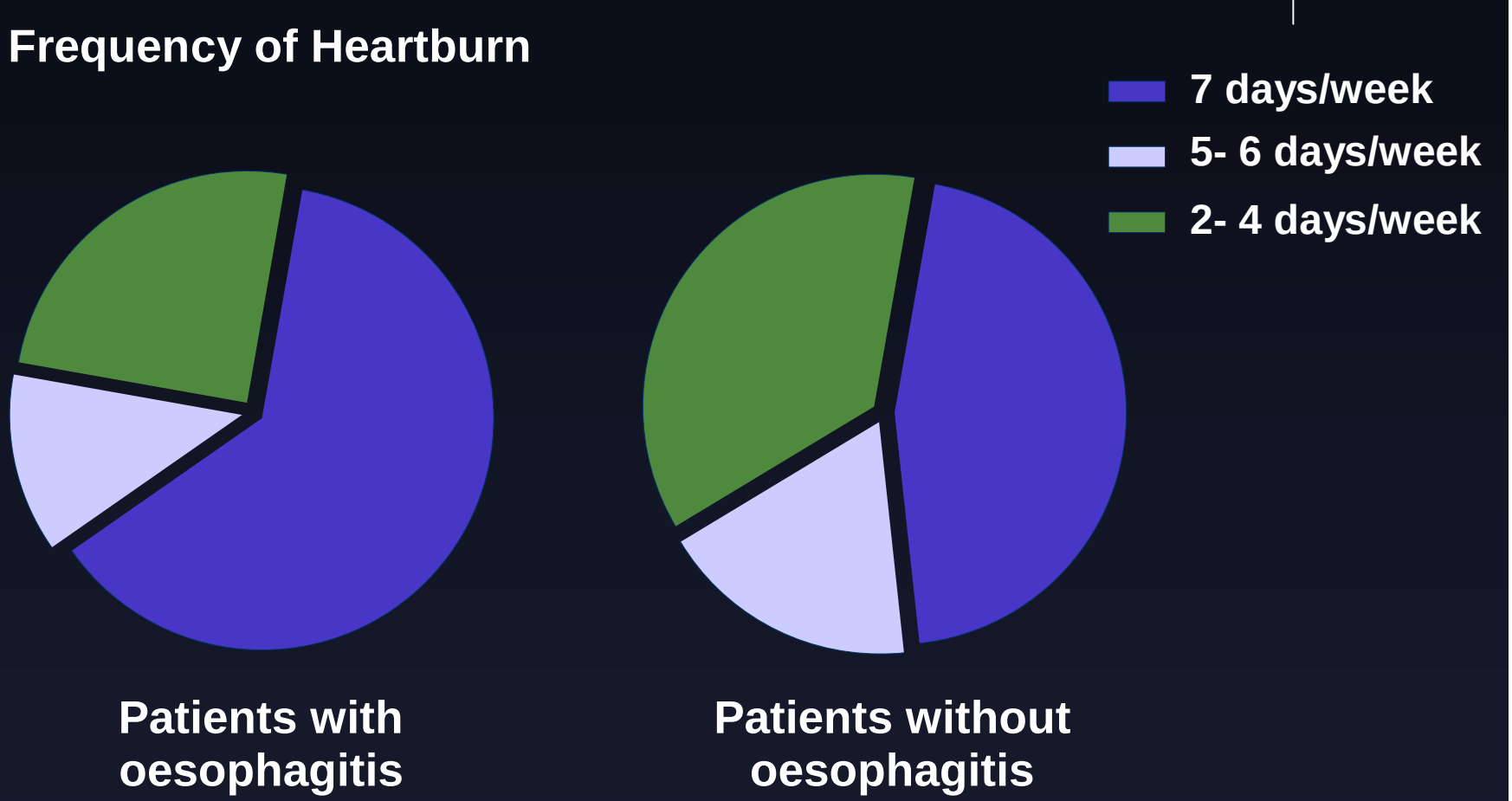


Severity of Heartburn in Patients With and Without Oesophagitis



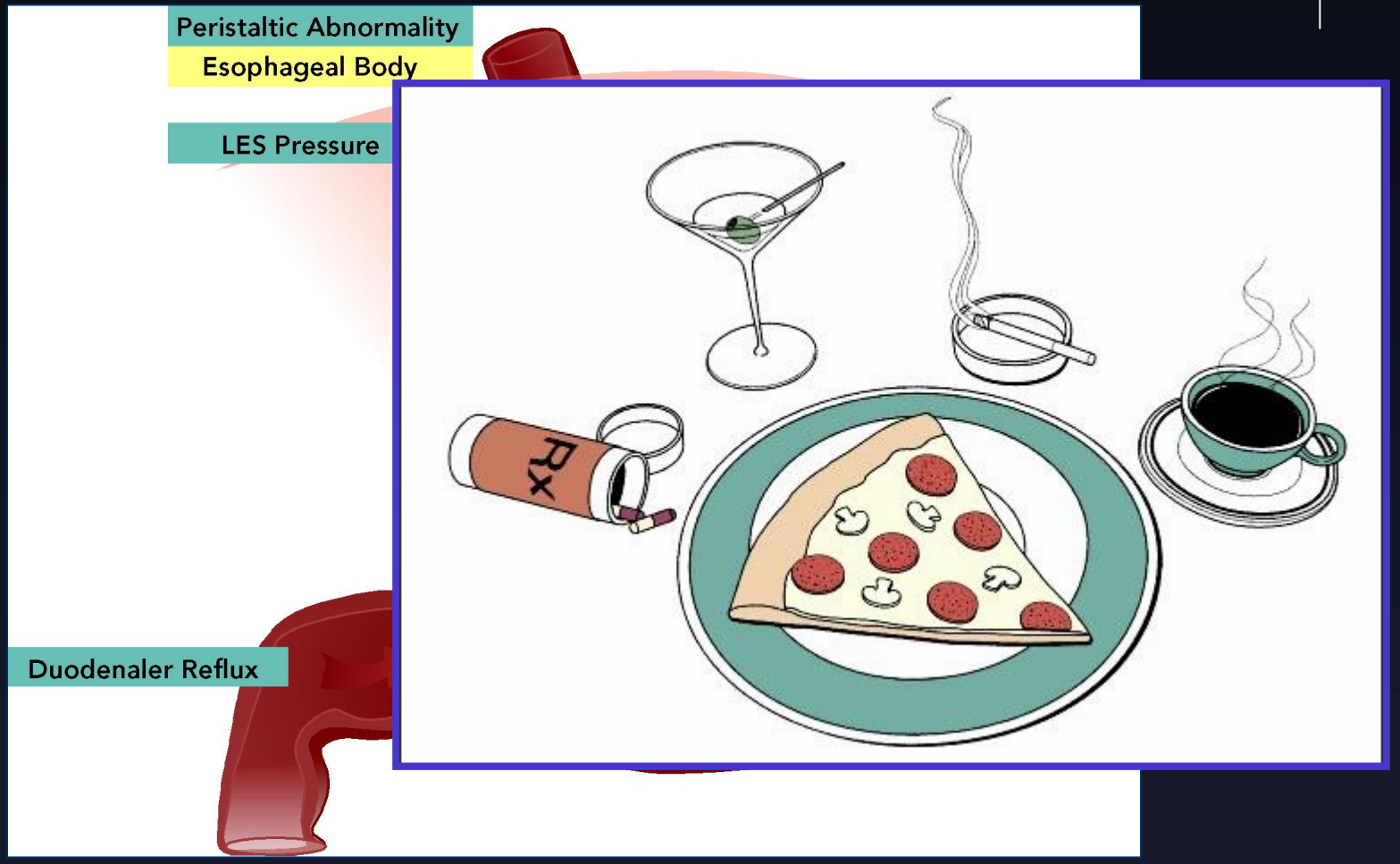
Smout; 1998

Frequency of Heartburn in Patients With and Without Oesophagitis



Smout; 1997

Pathophysiology



Modlin & Sachs; 1997

Case 1: Amanda

- Would you manage Amanda by:
  - Referral to a gastroenterology unit ?
  - Reassurance?
  - Treatment with a proton pump inhibitor ?
  - Referral for endoscopy ?
  - Lifestyle modification ?

Case 1: Amanda

- Would you manage Amanda by:
  - Referral to a gastroenterology unit ? No
  - Reassurance ? Yes
  - Treatment with a proton pump inhibitor ? Yes
  - Referral for endoscopy ? No
  - Lifestyle modification ? Yes

Therapeutic Trial of PPI as Diagnostic Test

- Symptom based diagnosis of GORD (**without alarm symptoms**)
  - Standard dose PPI
  - Response supports the diagnosis
  - Typical symptoms respond within 2 weeks
  - Atypical symptoms may take 8 weeks

Therapeutic Trial as Diagnostic Test

- “Pantoprazole 40 mg bd given for 10 days to patients with symptoms suggestive of GORD showed a sensitivity of 75%”

Neville et al; 1998

- Sensitivity and specificity moderate but may be comparable to pH monitoring

Management

- PPI therapy
  - Rapid and reliable resolution and healing of oesophagitis
  - 80% after 8 weeks
  - Initial trial of once-daily PPI
    - Before breakfast for 4-8 wks
  - Evening or nocturnal Sx may be dosed before the evening meal
- Minority will not achieve symptom resolution
  - Most likely to have NERD

Maintenance Therapy

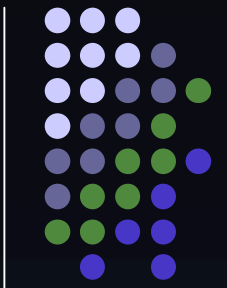
- Lowest dose and frequency of drug
- Who needs long-term treatment?
  - Long-standing severe symptoms or a higher grade of oesophagitis need continuous therapy
  - A few need twice daily dosing
- Trial of treatment cessation for short-term symptoms
- Intermittent ‘on demand’ therapy can be effective
- Prokinetic agents have little role in management

Lifestyle modification

- Weight loss
- Dietary fat reduction
- Avoidance of foods that precipitate symptoms
- Smoking cessation
- Reduction in alcohol intake
- No food 3 hours before bed
- Frequent, moderate sized meals
- Elevate bed-head

Kitchin & Castell, Arch Intern Med 1991;151:448-54

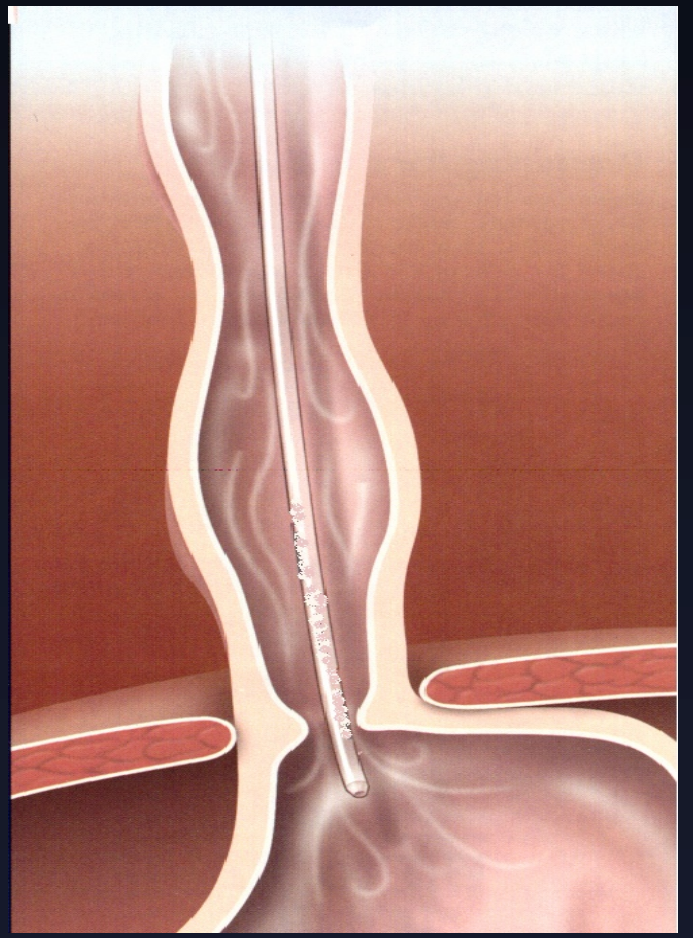
Are PPI's safe?



- Minor adverse effects
  - Headache
  - Nausea
  - Diarrhoea
- Slightly increased risk of community-acquired pneumonia and bacterial gastroenteritis
- Rarely interstitial nephritis

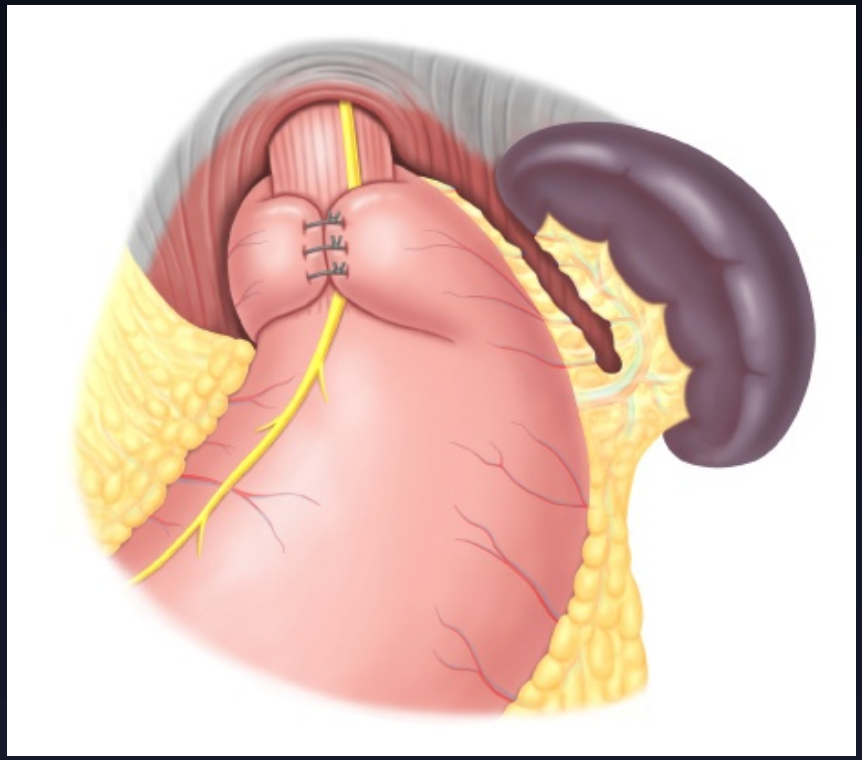
Refractory Symptoms

- Lifestyle!
- PPI
  - 30 mins pre meals
  - Twice daily dosing
  - Increase dose
  - Switch drug
- Stop NSAIDs
- Endoscopy
- ? Other causes of symptoms
  - Altered motility
  - Functional dyspepsia
- Trial of prokinetic agent
- pH testing



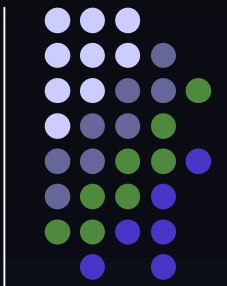
Surgery

- Laparoscopic v open
  - Comparable efficacy
- Mortality 0.3%
- 94% 1yr satisfaction
- 86-88% off PPI at 5y
- Experience important
- New symptoms common



Terry et al, Surg Endosc 2001, 15:691-9

Case 2: John

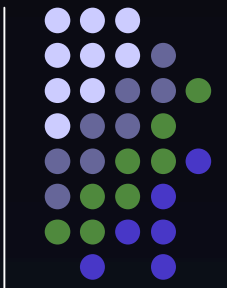


- 53 year old man
- Presents to your clinic
  - Heartburn for > 5 years
  - Worsening symptoms
  - Occasional dysphagia for solids
  - No melaena, haematemesis, weight loss
  - No odynophagia
  - Smoker
- Examination normal

Case 2: John

- What would you do next?
  - Reassure patient
  - Treat with trial of PPI
  - Refer to gastroenterology service
  - Refer for endoscopy

Case 2: John



- What would you do next?
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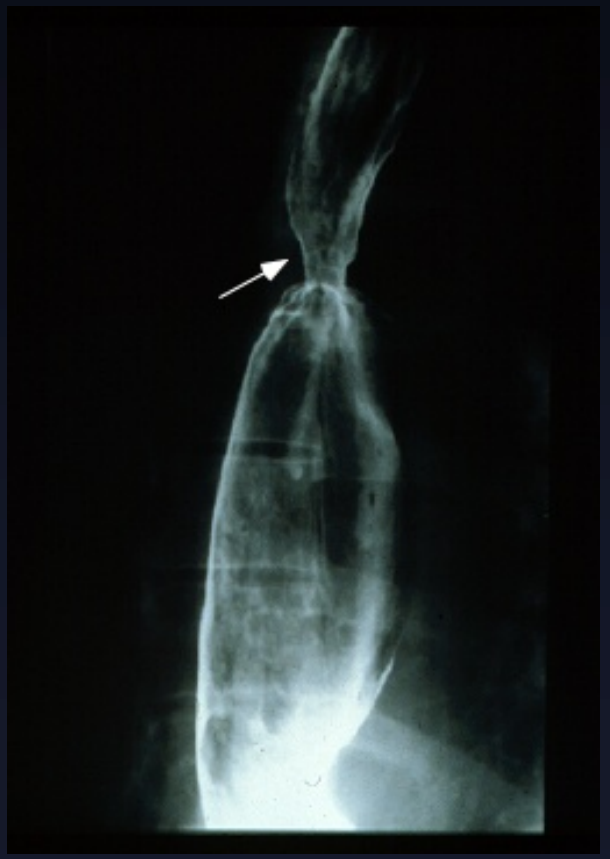
  - Treat with trial of PPI
  - Refer to gastroenterology service
  - Refer for endoscopy

Endoscopy Recommendations

Indications for Early Endoscopy
▪ Alarm Symptoms ▪ Diagnostic problems: mixed, non-specific, atypical symptoms ▪ Recurrence of symptoms on appropriate Rx Check compliance, choice of agent, timing of dosing ▪ Symptoms >5-10 years or age >50 years Cannot predict Barrett's oesophagus/CA ▪ Preoperative assessment
Additional situations in which endoscopy may be appropriate
▪ To detect and manage Barrett's oesophagus ▪ Provision of reassurance when verbal reassurance is inadequate

Barium Swallow

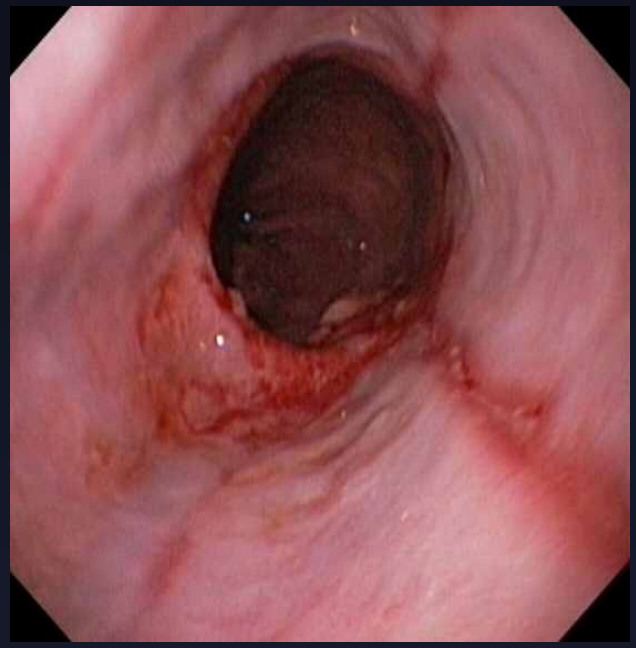
- Has a minor role in the investigation of GORD
- Selected cases it may be useful to plan management
  - Persistent dysphagia where a stricture suspected
  - Assessment of a large hiatus hernia



Case 2: John

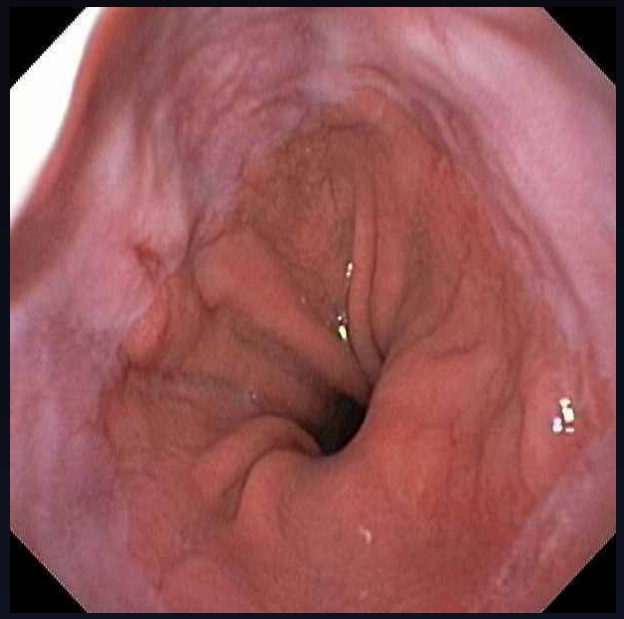
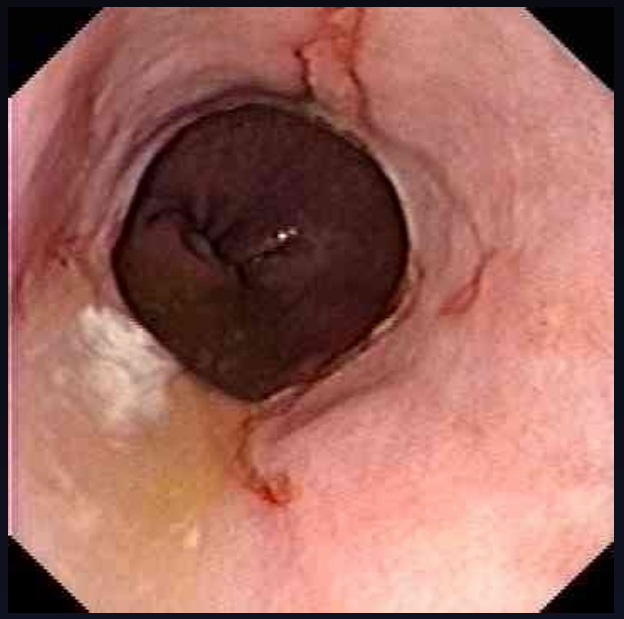
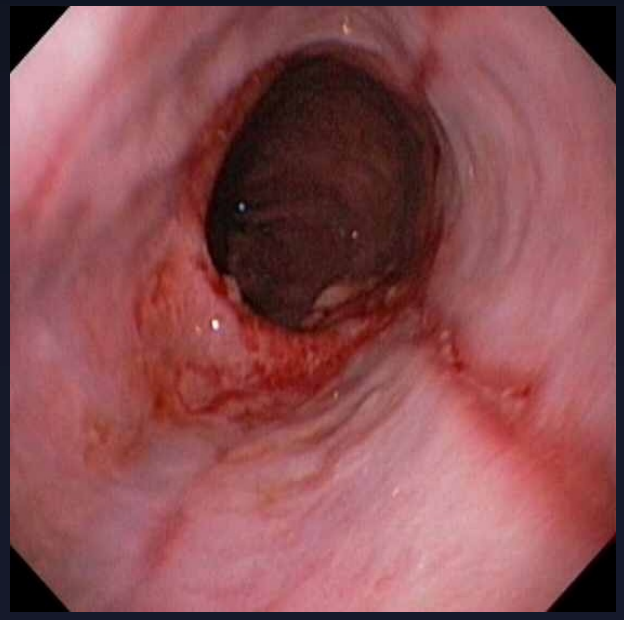
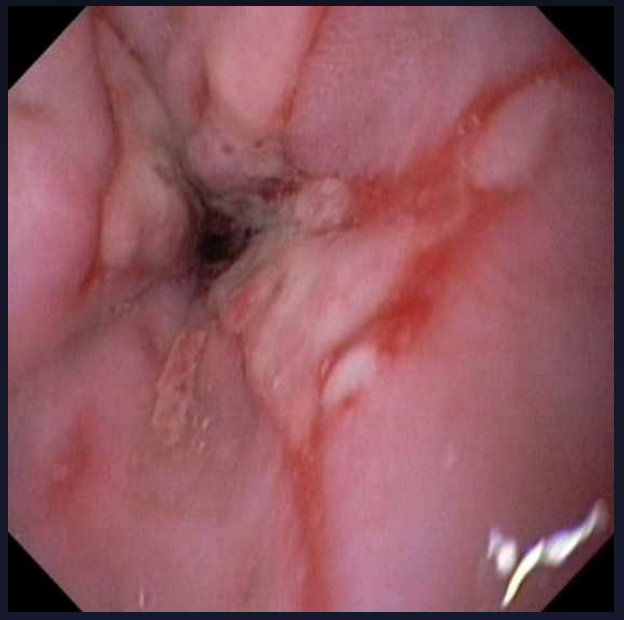
- Referred to gastroenterologist who performed a gastroscopy

- Grade 3 oesophagitis



Oesophagitis

ENDOSCOPIC GRADING SYSTEM FOR REFLUX ESOPHAGITIS		
Classification	**Grade**	**Characteristics**
Savary-Miller classification	I	Single lesion (erosive or exudative) involving only one longitudinal fold
	II	Multiple lesions (erosive or exudative) involving more than one longitudinal fold but not circumferential
	III	Circumferential (erosive or exudative) lesions
	IV	Chronic lesions: ulcer, stricture, or short esophagus ± lesions of grades I to III
	V	Barrett's epithelium ± lesion of grade I through IV
Los Angeles classification	A	One or more mucosal breaks (erosions) confined to the folds, each no longer than 5 mm
	B	At least one mucosal break more than 5 mm long confined to the mucosal folds but not continuous between the tops of the mucosal folds
	C	At least one mucosal break continuous between the tops of two or more mucosal folds but not circumferential
	D	Circumferential mucosal break
Hetzel (Hetzel-Dent) classification	0	Normally appearing mucosa
	I	Mucosal edema, hyperemia, or friability
	II	Erosions that involve < 10% of the lower 5 cm of the esophagus
	III	Erosions that involve 10% to 50% of the distal esophagus
	IV	Deep ulceration or erosions that involve > 50% of the distal esophagus

Case 2: John

- Management?
  - Course of PPI therapy with trial of cessation
  - Long-term maintenance PPI therapy
  - Repeat endoscopy
  - Testing for Helicobacter pylori

Case 2: John

- Management?
  - Course of PPI therapy with trial of cessation
  - Long-term maintenance PPI therapy
  - Repeat endoscopy
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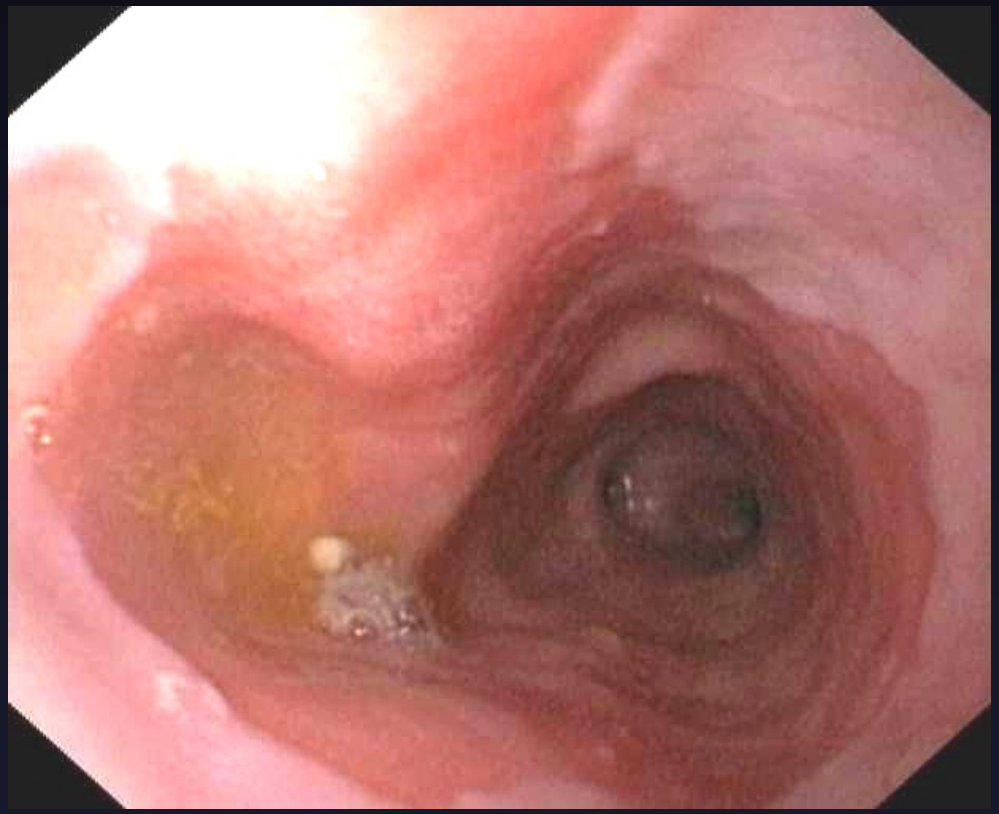
Case 2: John

- PPI omeprazole 40mg daily
- Symptoms improve
- Repeat endoscopy in 8 weeks time

Case 2: John

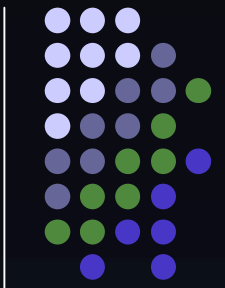
- What is this finding?



Barrett's Oesophagus

- Definition
  - Metaplastic columner epithelium from the GOJ extending proximally
  - Specialised intestinal metaplasia (SIM) can be found
  - Increases risk of dysplasia and adenoCA
- 4-8% Caucasians with GORD who have endoscopy will have Barrett's
  - Men >50 yrs at highest risk
  - Smoking and obesity added risk
  - Frequency and severity of heartburn NOT predictive

Barrett's Oesophagus

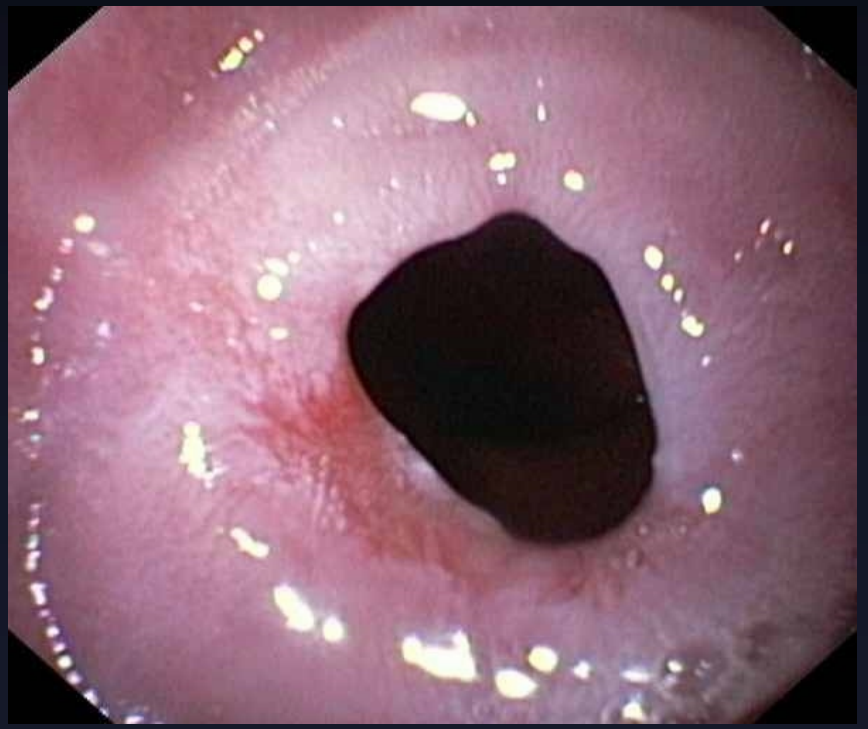


- No evidence that acid control with PPI or surgery reverses the condition
- Whether PPI reduces risk of progression to dysplasia yet to be determined
- No evidence that screening the general population or those with GORD for Barrett's would be beneficial
- When patients found to have Barrett's ongoing surveillance offered
  - No evidence of benefit
- **Risk of CA for Barrett's >3cm 0.5%/year**

What are the other complications of GORD?

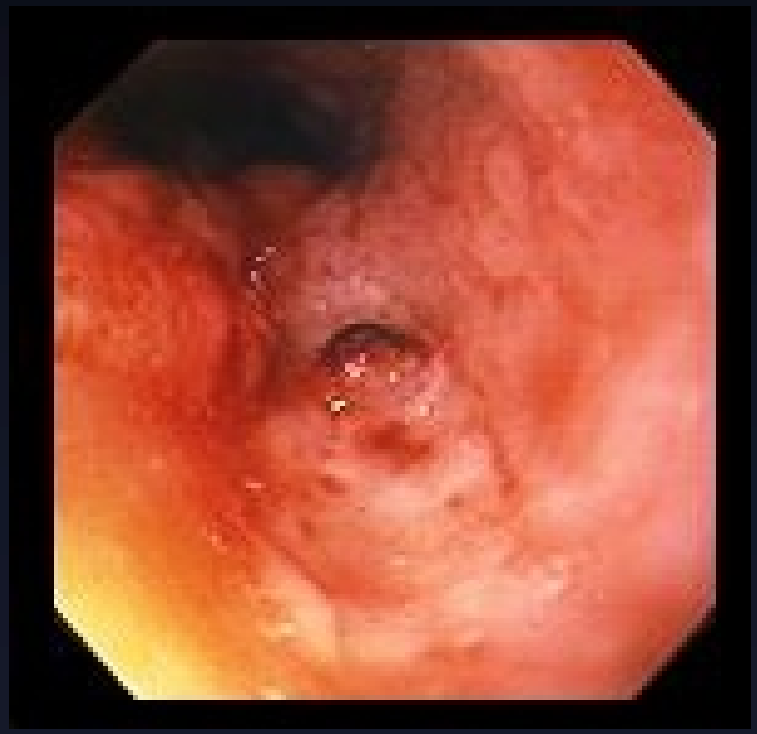
Oesophageal Stricture

- Oesophageal stricture



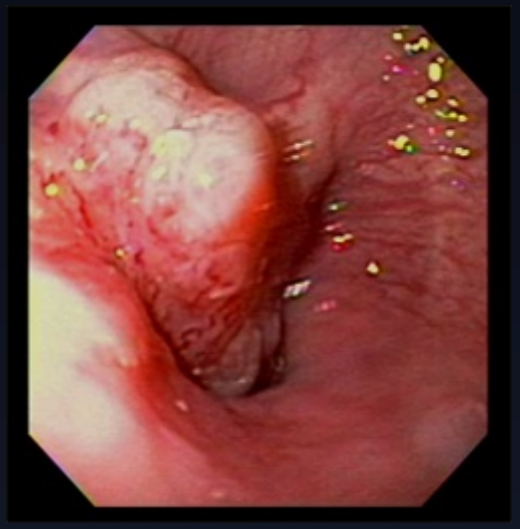
Haemorrhage

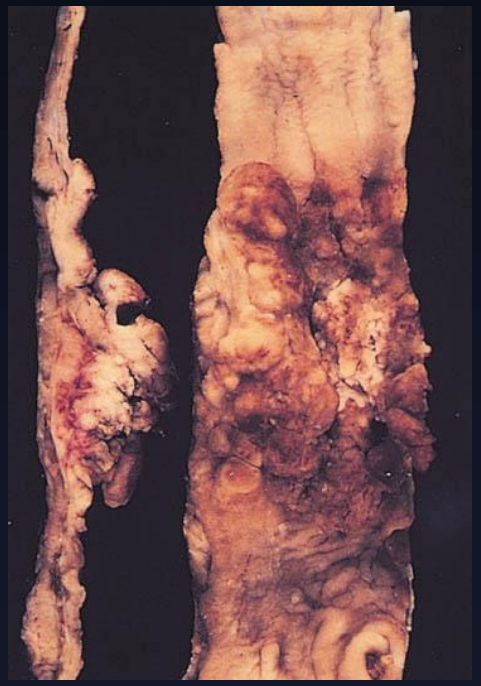
- Haemorrhage



Adenocarcinoma of the Oesophagus

- Adenocarcinoma
  - Dramatic rise in incidence 20th century
  - Risk factors
    - Smoking
    - Obesity
    - GORD
  - Most arise from Barrett's oesophagus
  - >50% asymptomatic for reflux





Case 2: John

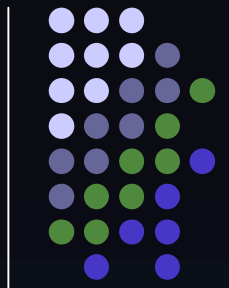
- You receive results from John's biopsies confirming he is Helicobacter pylori positive

- Questions
  - Should this be treated?
  - Will eradication improve his symptoms?
  - Will treatment increase or decrease his cancer risk?

John

- Answers
  - Should this be treated? Yes
  - Will eradication improve his symptoms? No
  - Will treatment increase or decrease his cancer risk? Decrease – gastric cancer

Helicobacter pylori and GORD



- Frequently present in GORD as both conditions common
- H. pylori does not cause GORD
- Infection does not reduce the risk of GORD

Helicobacter pylori and GORD

- PPIs cause a worsening of the histological grade of **gastritis**
  - Accelerate gastric mucosal atrophy and intestinal metaplasia
  - Not seen when PPIs used in uninfected patients or in those in whom H. pylori eradicated prior to long-term PPI use
  - Changes are risk factors for ***adenocarcinoma*** stomach

  - **Eradication recommended prior to long term PPI use for GORD, especially in young patients**

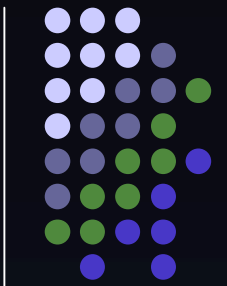
Case 3: Cathy

- 37 year old woman
- Epigastric pain 3 times per week
- Over 6 months symptoms
- Burning sensation
- Moderate severity
- Not relieved by belching or passage of flatus
- Usually occurs after meals but can occur at other times
- No reflux
- No alarm symptoms

Case 3: Cathy

- Regular NSAID use for headaches
- No other medical problems
- Lives with husband and 2 children
- No alcohol, non-smoker
- Works part-time receptionist

Case 3: Cathy



- What is the diagnosis?
- What is the first step in management?

Dyspepsia

- Defined as pain or discomfort located in central upper abdomen
- May co-exist and be difficult to differentiate from GORD
- Most common cause of organic dyspepsia is reflux oesophagitis followed by PUD
- Functional dyspepsia accounts for >60% of all dyspepsia

Management

- Stop aspirin or NSAID!
- If clear symptoms of heartburn trial PPI
- If age >55 yrs or alarm symptoms
  - Gastroscopy

- Cathy stops NSAID
  - 4 weeks later no improvement
  - What should be done next?

Management

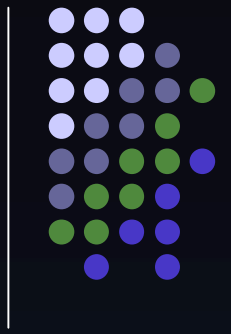
- Symptoms refractory to treatment
  - Test for H. pylori
- H. pylori positive
  - Eradicate
- H. pylori negative or no improvement after eradication
  - Trial of PPI therapy for 4-8 weeks

Case 3: Cathy

- Cathy is positive for H. pylori and has no improvement after eradication or PPI therapy
- Has normal gastroscopy

- Is there anything that can be done to relieve her symptoms?

Functional Dyspepsia



- Re-evaluate symptoms and diagnosis
- Consider other sources of abdominal pain
  - Pancreas, colon, biliary tract
- Does the patient have symptoms of delayed gastric emptying?
- Does the patient have IBS?
- Does the patient have panic disorder or psychological issues?

Functional Dyspepsia

- Consider:
  - Antidepressants
  - Hypnotherapy
  - Behaviour therapy
  - Prokinetic agents

Summary

- GORD is defined as a condition that develops when the reflux of stomach contents causes troublesome symptoms or complications
- Most GORD is non-erosive but about one third have oesophagitis
- GORD symptoms overlap with peptic ulcer disease, delayed gastric emptying and functional dyspepsia
- Positive response to a therapeutic trial of PPI therapy supports diagnosis

Summary

- Endoscopy
  - Diagnosis is unclear
  - Refractory symptoms
  - Alarm symptoms
- Management involves an initial trial of PPI therapy then a tailored long-term treatment plan
  - Lowest effective PPI dose and frequency
  - Lifestyle modification
  - Eradicate H. pylori if long-term treatment