Live

Approach to the patient with dysphagia

Part 1 Dysphagia

1hour 12 minutes

Dr Charlie Andrews

NHS South West

The Primary Care Society for Gastroenterology

PCSG

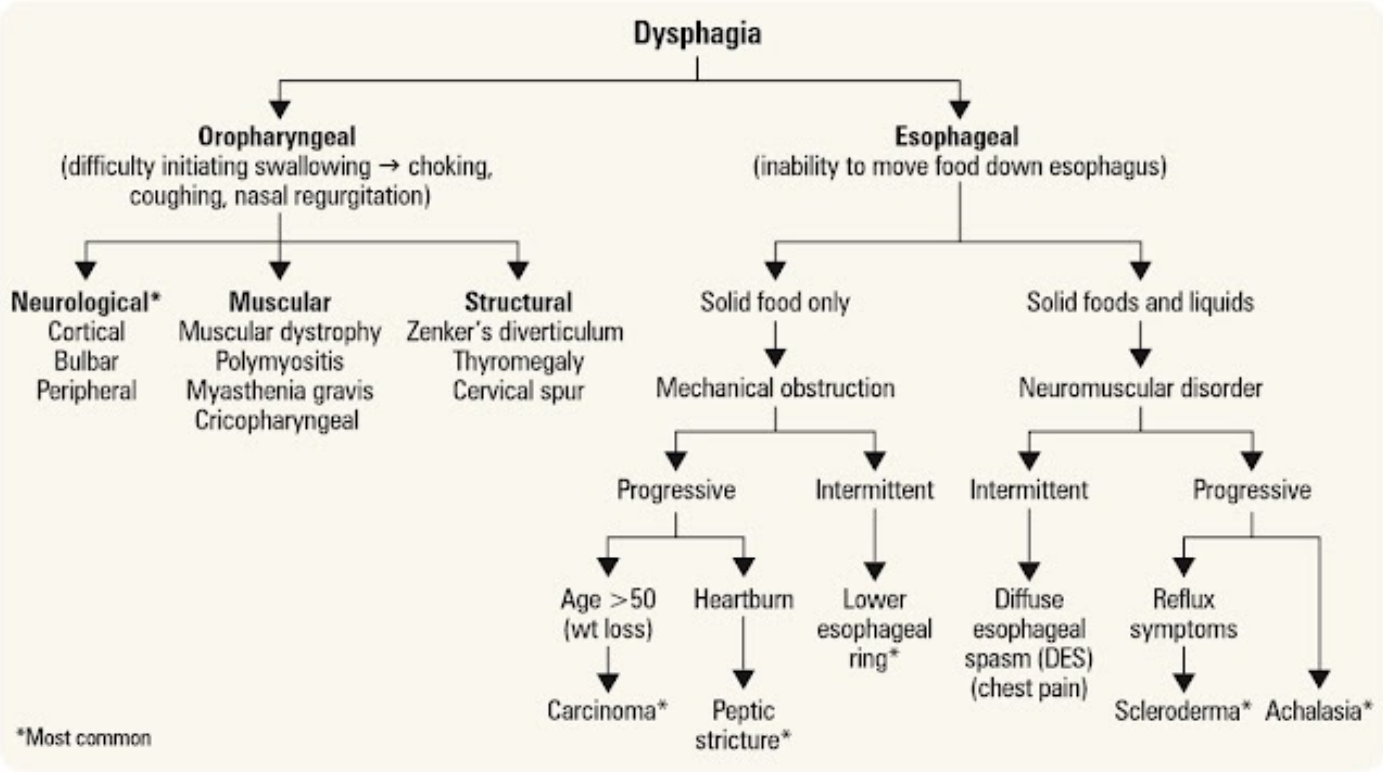
Dysphagia… Difficulty swallowing

Odynophagia…Painful swallow

Key messages

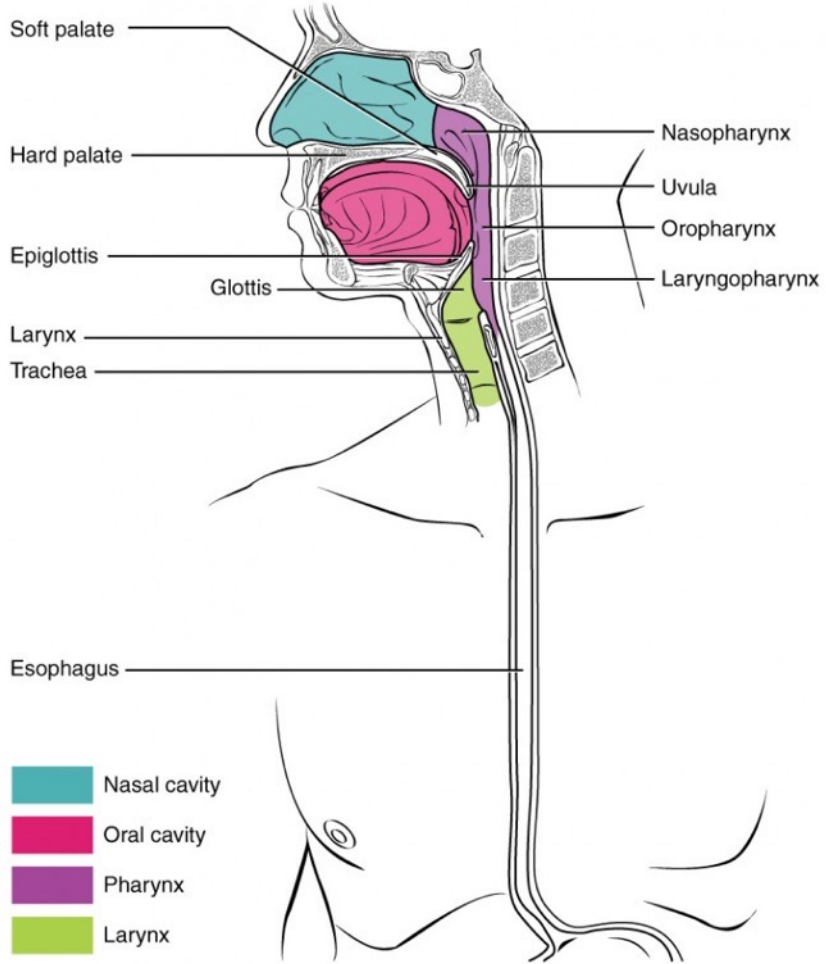
You will develop a system for answering the following questions:

- Does this patient have oropharyngeal (‘high’) dysphagia
- …Or do they have oesophageal dysphagia?
- If it is oropharyngeal dysphagia, is it a **mechanical** cause of dysphagia or a **motility** problem?


Dysphagia
Oropharyngeal
(difficulty initiating swallowing → choking, coughing, nasal regurgitation)
Esophageal
(inability to move food down esophagus)
Neurological*
Cortical
Bulbar
Peripheral
Muscular
Muscular dystrophy
Polymyositis
Myasthenia gravis
Cricopharyngeal
Structural
Zenker's diverticulum
Thyromegaly
Cervical spur
Solid food only
Solid foods and liquids
Mechanical obstruction
Neuromuscular disorder
Progressive
Intermittent
Intermittent
Progressive
Age >50 (wt loss)
Heartburn
Lower esophageal ring*
Diffuse esophageal spasm (DES) (chest pain)
Reflux symptoms
Carcinoma*
Peptic stricture*
Scleroderma*
Achalasia*
*Most common

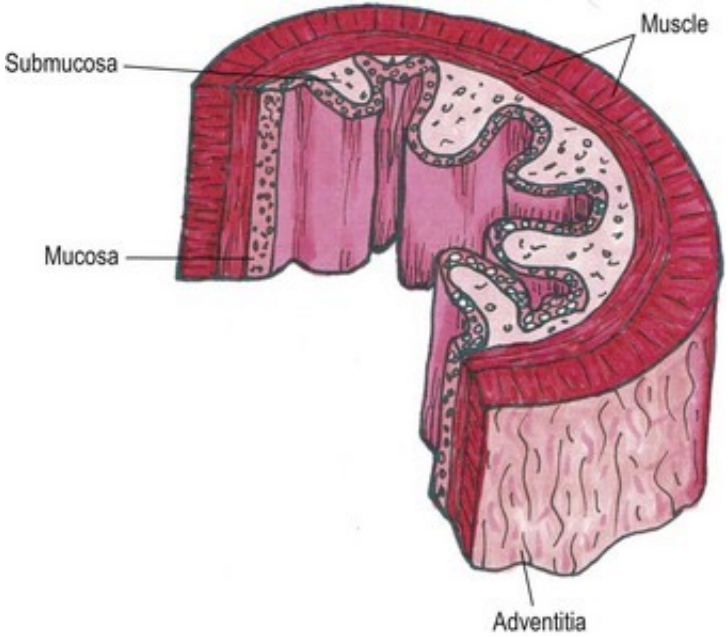
Contents

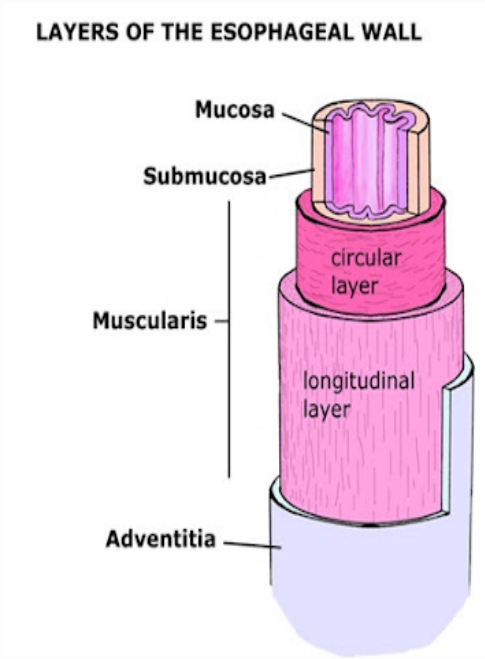
- Functional anatomy and physiology of the oesophagus
- Oropharyngeal dysphagia
- Oesophageal dysphagia
  - Mechanical obstruction
  - Dysmotility
- Investigations for dysphagia
- Case studies



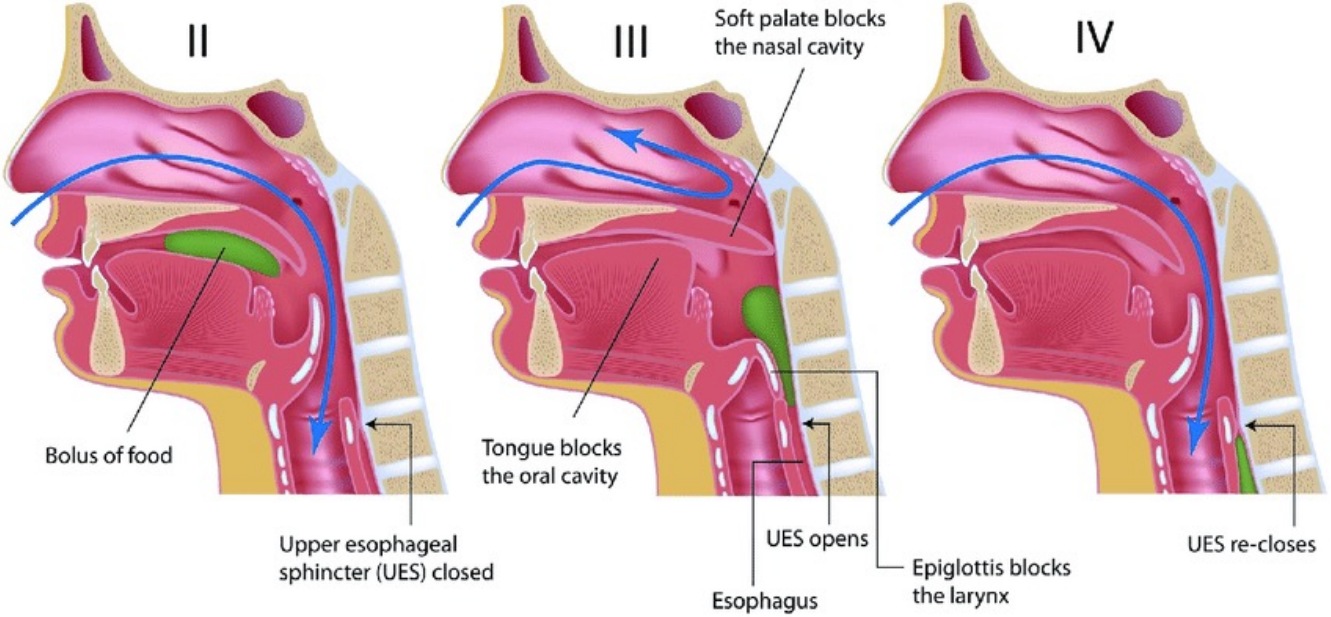
- **35-40cm**

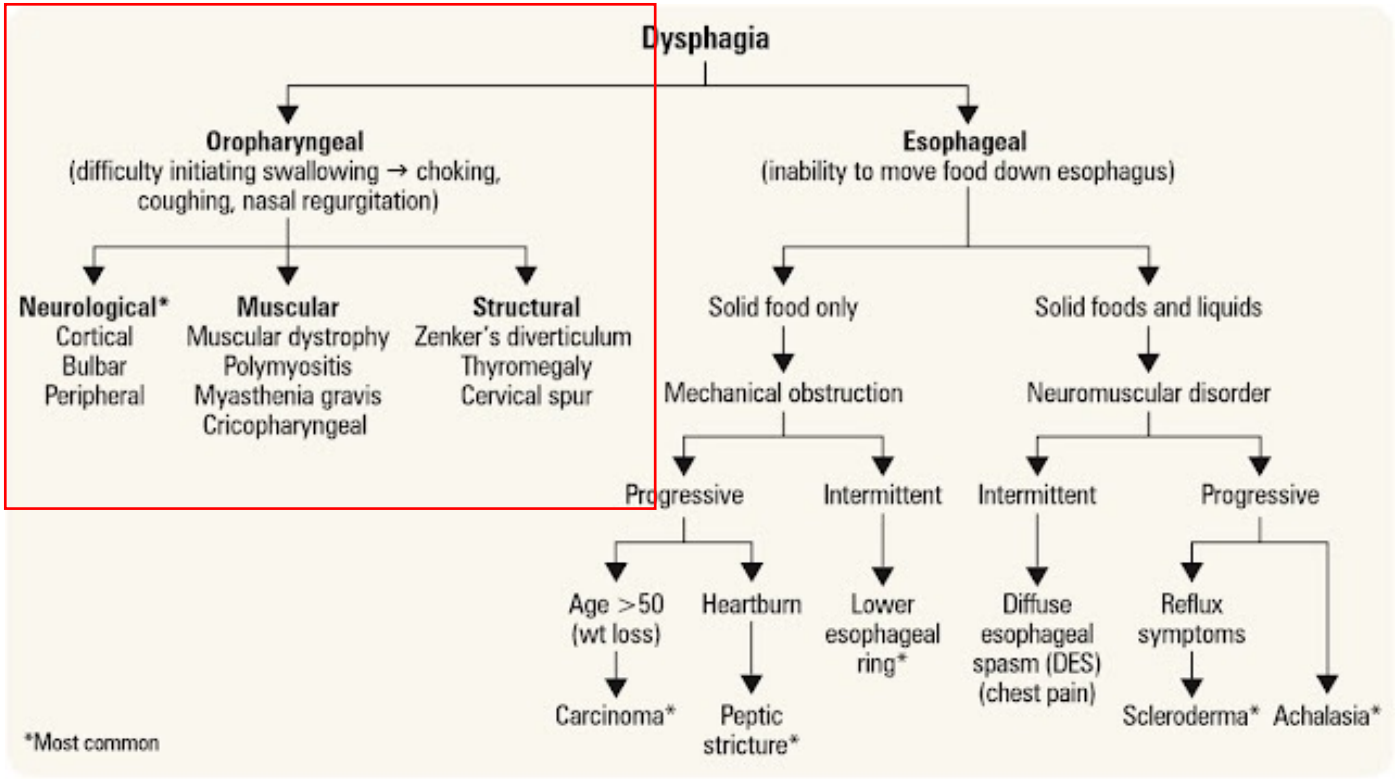
- **Upper oesophageal sphincter**
  - Cricopharyngeus
  - Inferior constrictor muscles
- **Lower oesophageal sphincter**
  - Muscle thickening
  - Angle of His
- **Relationships**
  - Aorta and cardiac border
  - Bronchus
  - Cervical/thoracic spine


Submucosa
Muscle
Mucosa
Adventitia


LAYERS OF THE ESOPHAGEAL WALL
Mucosa
Submucosa
circular layer
Muscularis
longitudinal layer
Adventitia

Phase	Description
Oral phase	Bolus moves from the oral cavity into the oropharynx (voluntary process)
Pharyngeal phase	Bolus moves from the oropharynx into the oesophagus (involuntary process)
Oesophageal phase	Bolus moves through the oesophagus and into the stomach (involuntary process)


II
III
IV
Soft palate blocks
the nasal cavity
Bolus of food
Tongue blocks
the oral cavity
Upper esophageal
sphincter (UES) closed
UES opens
Esophagus
Epiglottis blocks
the larynx
UES re-closes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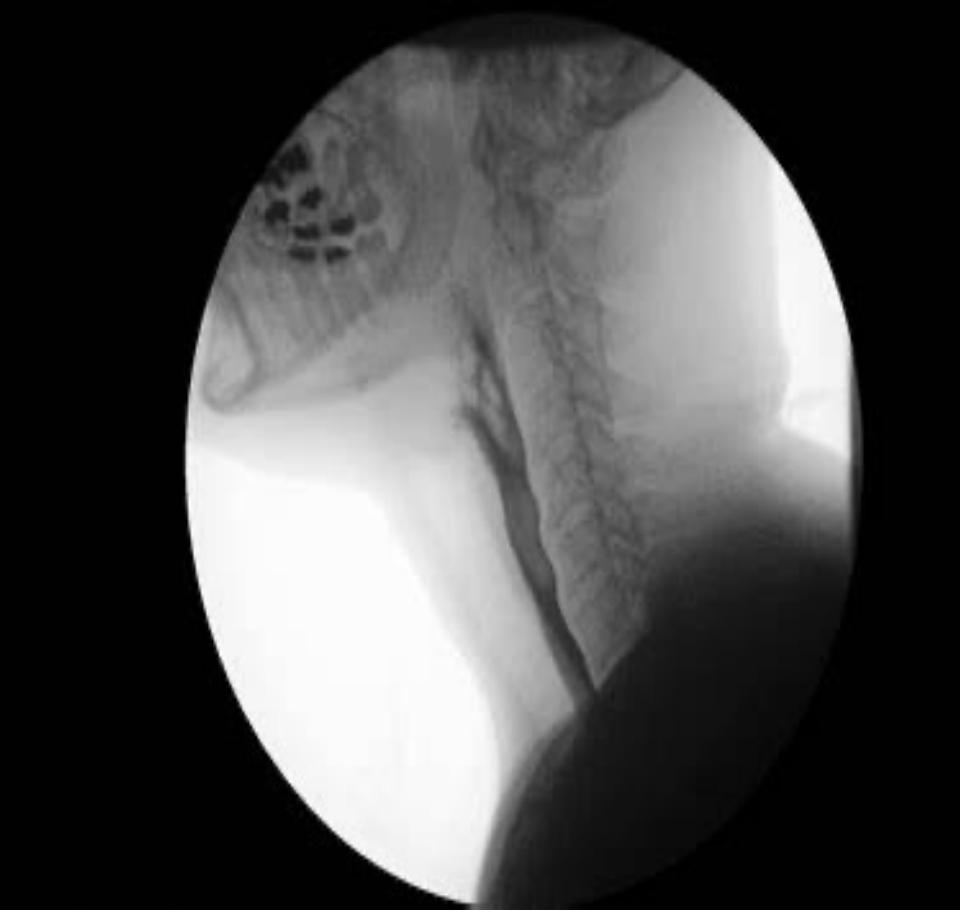
Oropharyngeal dysphagia

- Difficulty **initiating** the swallow leading to symptoms of dysphagia
- Risks:
  - Malnutrition
  - Aspiration
- Questions I would ask….
  - What is the quality of the voice?
  - When in the swallow do the symptoms occur?
  - Do you get any nasal regurgitation of food/fluids?
  - Do you ever choke on food/cough after eating?
  - What type of food/drinks exacerbate the problem?
  - Is the patient known to have a neurological condition?

Causes of oropharyngeal dysphagia

Neuromuscular	Structural
Stroke	Pharyngitis
Parkinson's disease	Radiation injury
Severe dementia	Cervical osteophytes
Motor Neurone Disease (MND)	Oropharyngeal cancers
Brain tumours	Cleft palate
Neurological infections	Large thyroid
Muscular dystrophies	Cricopharyngeal bars/webs
Myasthenia Gravis	Zenker's diverticulum (Pharyngeal pouch)
Polymyositis	



Oropharyngeal dysphagia

- This is the remit of:
  - ENT
  - Neurology
  - NOT gastroenterology!
- How is it investigated?
  - Flexible nasendoscopy
  - Modified barium swallow/video fluoroscopy
- Management
  - SALT
  - PEG
  - ENT surgery

An 87 year old is referred to the gastroenterology team with a 6 months history of dysphagia. He reports that he chokes on food and fluid, has been losing weight, and has had several chest infections over the last 12 months. He had a stroke 3 years ago, and has a left sided hemiparesis.

- Choking on food and fluid
- Aspiration
- Neurological history
- Weight loss – food avoidance?

Oesophageal dysphagia

- Difficulty moving food **from the oropharynx to the stomach**
- Relies on:
  - An unobstructed oesophagus
  - Suitable peristalsis of the oesophagus
  - Relaxation of the lower oesophageal sphincter

- 2 primary aetiologies of oesophgeal dysphagia
  - Mechanical obstruction
  - Dysmotility

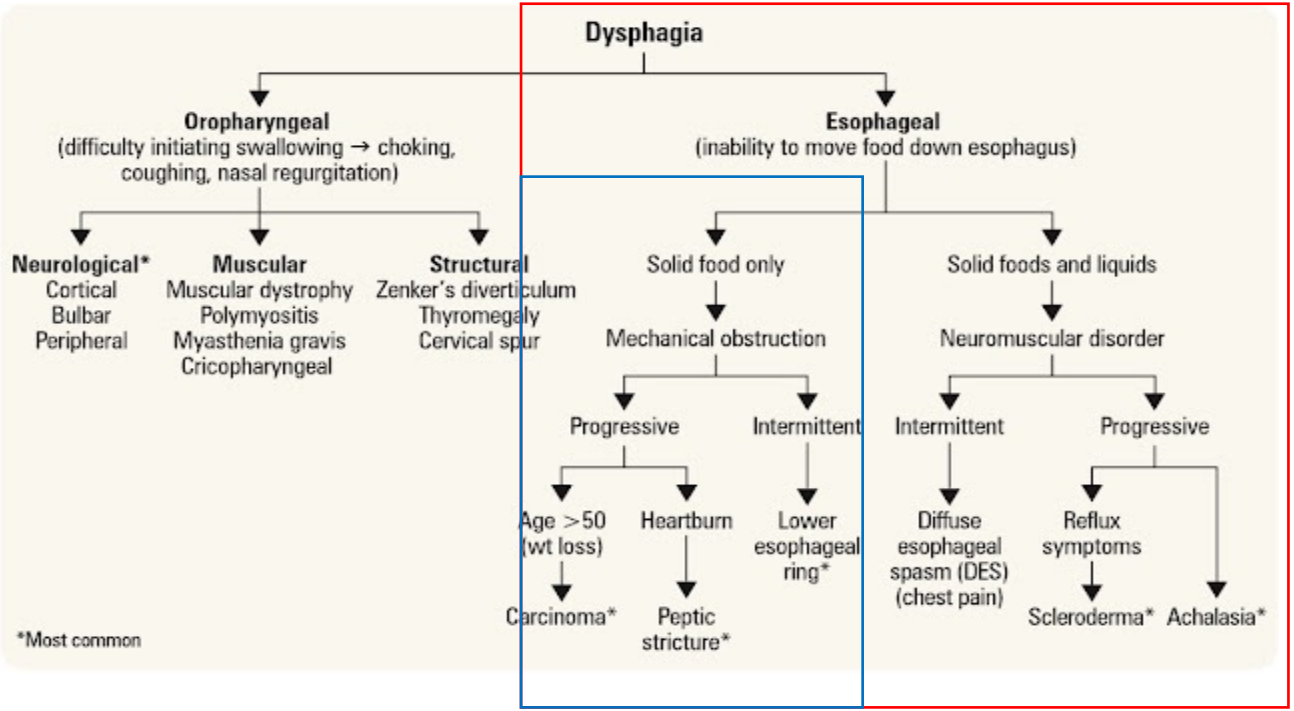
Investigations

- Does a 32 year old fit and well man with intermittent dysphagia need a 2-week wait upper GI endoscopy?
  - YES!

- In our toolkit….
  - Upper endoscopy
  - Barium swallow
  - HR Manometry

Mechanical causes of dysphagia

- Mainly **dysphagia to solids**
- Need to **differentiate between intermittent and progressive** dysphagia
- **Causes of progressive dysphagia**:
  - Oesophageal cancer
  - Peptic stricture
  - External compression (Cardiomegaly, bronchial tumours, enlarged mediastinal LNs)
- **Causes of intermittent dysphagia**:
  - EoE
  - Schatzki ring
- **Best tests**
  - OGD
  - Barium swallow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What to ask in the oropharyngeal dysphagia history

- Solids vs liquids?
- Progressive vs. intermittent?
- Where does food get stuck?
- Any other symptoms/signs?
  - Chest pain
  - Weight loss
  - GORD
- Other medical problems?
- Medications?

Risk assessment – likelihood of malignant cause

A Age	Points
18-39	0
40-49	4
50-59	5
60-69	6
70-79	7
80-89	8
90-99	9

B Gender	
Male	0
Female	-1

C Current acid reflux	
Yes	-1
No	0

D Dysphagia localises to the neck	
Yes	-2
No	0

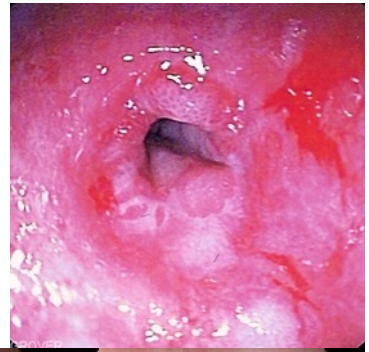
E Weight Loss >3kg	
Yes	2
No	0

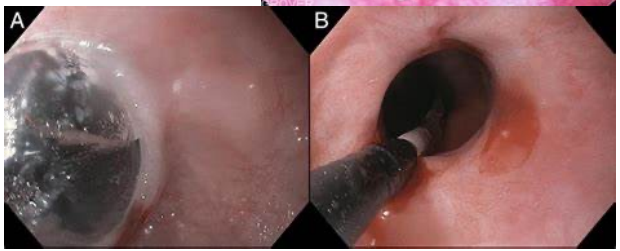
F Duration of symptoms	
Yes	-1.5
No	0

Edinburgh Dysphagia Score (EDS) = A+B+C+D+E+F

Score >3.5	Score <3.5
Higher risk	Lower risk

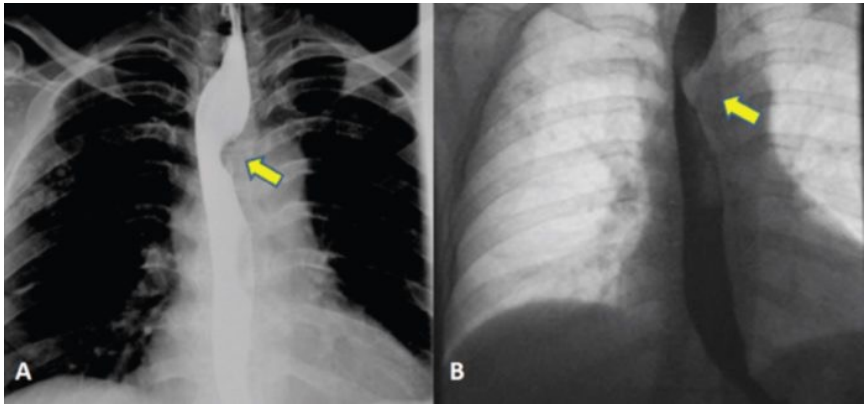
42 year old male with longstanding intermittent GORD, who has seen the GP with 4 weeks of progressive dysphagia and odynophagia to solid foods only. Trialled PPI intermittently over the last 2-3 years.

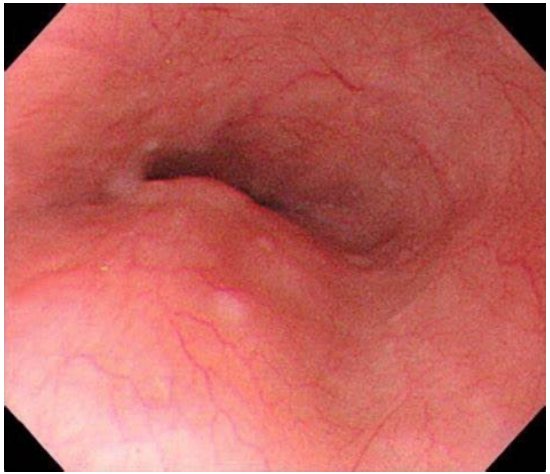




- Does he need an endoscopy?
  - Yes – endoscopy findings show a **peptic stricture** at the GOJ
- Management
  - PPI
  - Balloon dilation

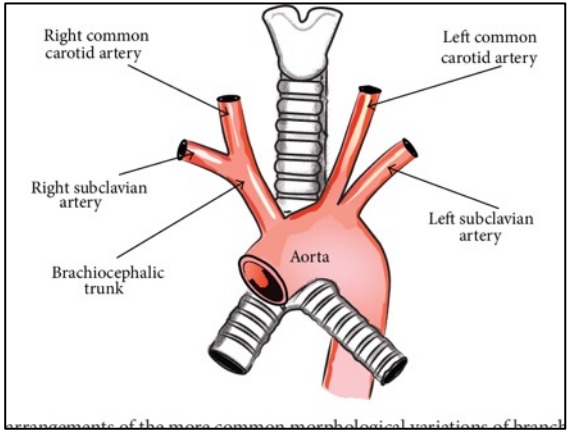
50 year old with dysphagia to solids over a 12 month period. The patient indicates mid-upper chest when showing you where the food gets stuck.

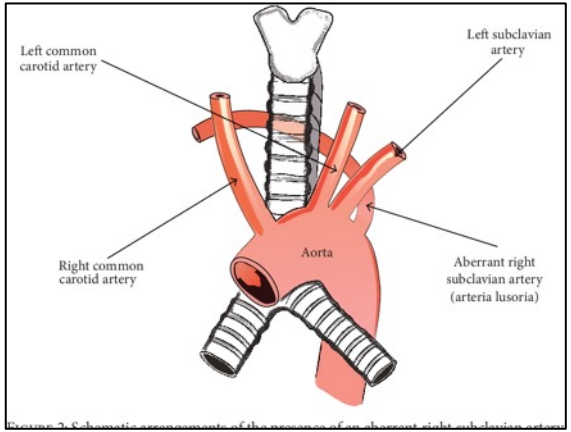




External compression (continued)

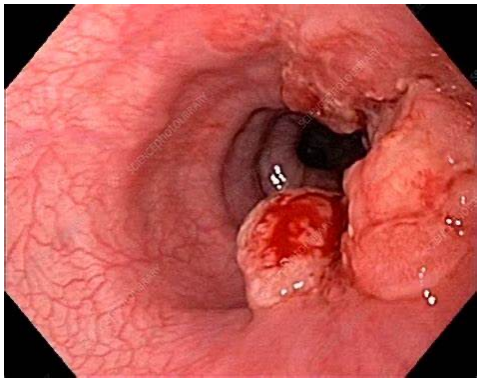
- Think about **related structures**
- Dysphagia Lusoria
  - Aberrant right subclavian artery
  - Congenital – 0.5-1%





68 year old man with progressive dysphagia over 4 months. Ex-smoker (40 pack years). Associated with anorexia, weight loss and lethargy.

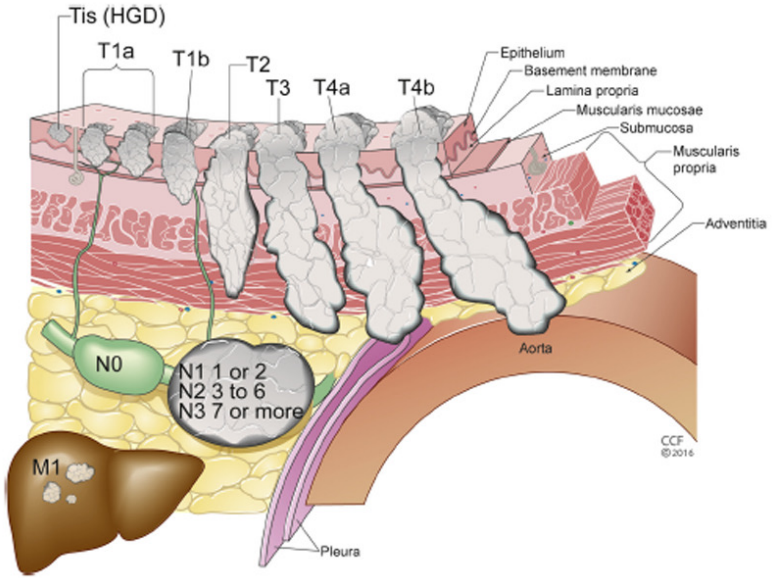
- Oesophageal cancer
  - 14th commonest cancer (UK)
  - Types:
    - Squamous cell carcinoma
    - Adenocarcinoma



Squamous epithelium → Barretts oesophagus → Low-grade dysplasia → High-grade dysplasia → Adenocarcinoma

Oesophageal cancer (continued)

Grade – TNM classification

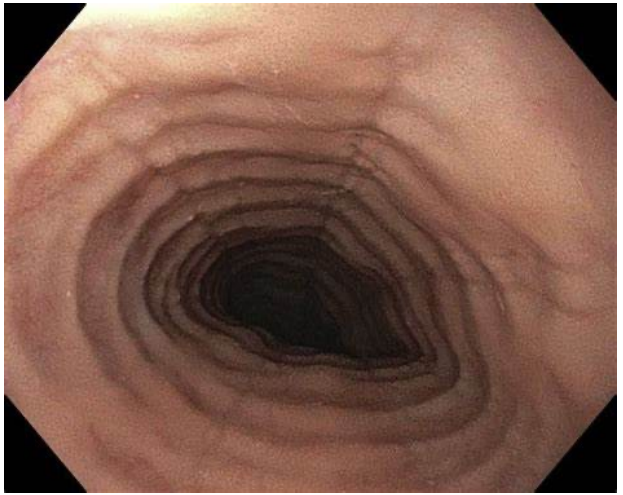


Staging – 0-4

- O – High grade dysplasia
- 1 – confined to the submucosa
- 2A – confined to submucosa, 1-2 LNs involved
- 2B – invaded the muscle layer
- 3 – Spread to muscle/adventitia and local structures and 1-2 LNs
- 4A – Spread to local structures, and multiple LNs
- 4B – metastatic spread

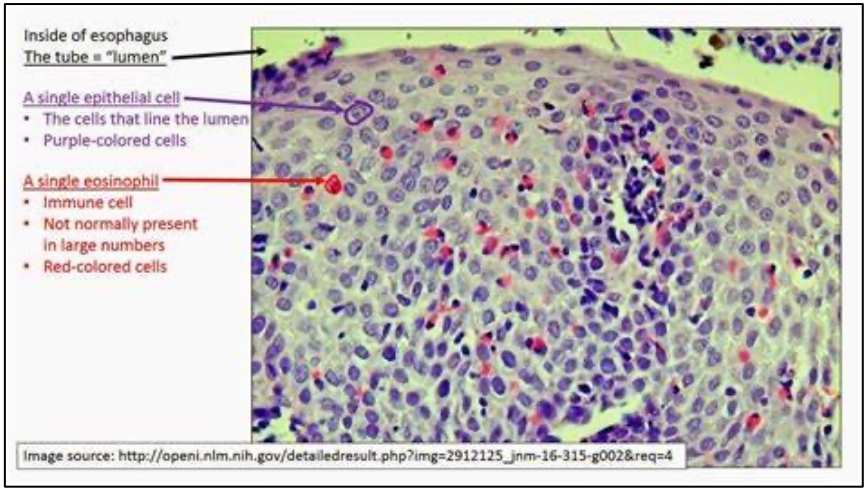
30 year old with recent admission to hospital with food bolus obstruction. Past medical history includes asthma and hay fever. Further similar episodes over the last 6 months, not requiring hospitalisation.

- Eosinophilic Oesophagitis
  - 0.4-1%
  - Atopy (50-80%)
  - Intermittent food bolus obstruction



Eosinophilic oesophagitis (continued)

- Diagnosis:
  - 6 random biopsies
  - >15 Eosinophils per HPF
- Management:
  - PPIs
  - Topical corticosteroids
  - Dietary – Six food exclusion diet
  - Endoscopic dilation



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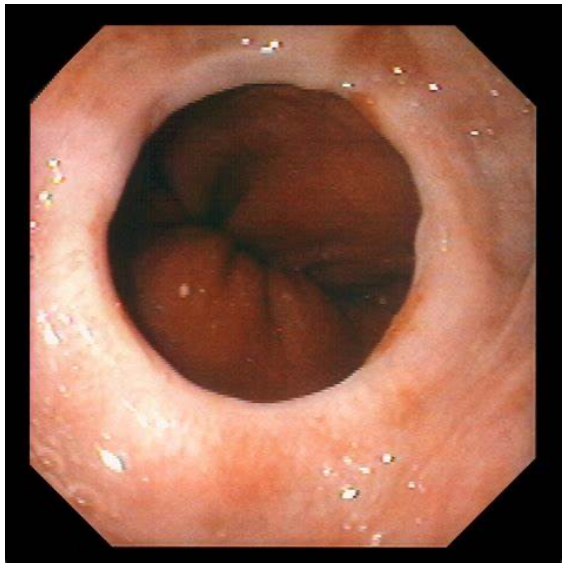
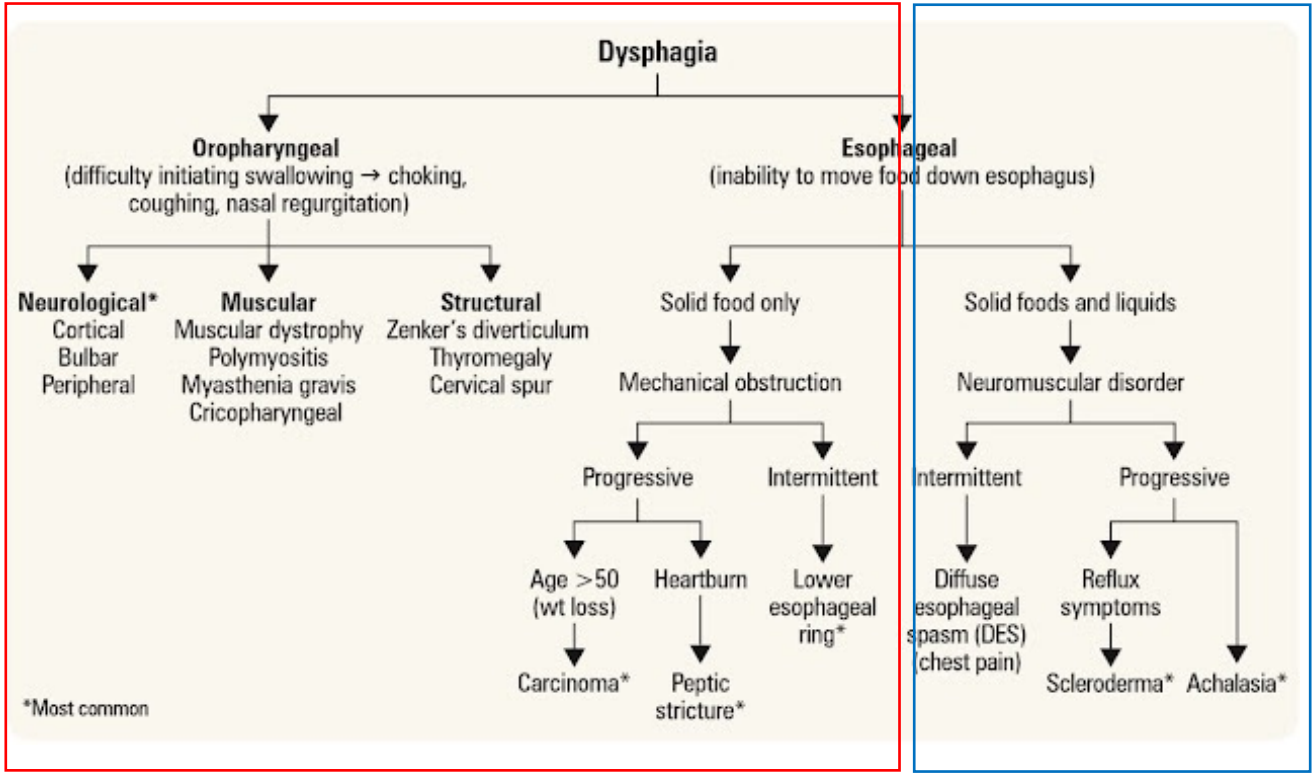
45 year old with intermittent self-resolving episodes of dysphagia over 6 months, mainly to meat. Was at a steakhouse recently and developed dysphagia, which only resolved after copious amounts of fluid. No weight loss, occasional GORD controlled by PPI.

- Schatzki ring
- Why?
  - Congenital/acquired
- Treatment
  - Nothing at all or…
  - Balloon dilation

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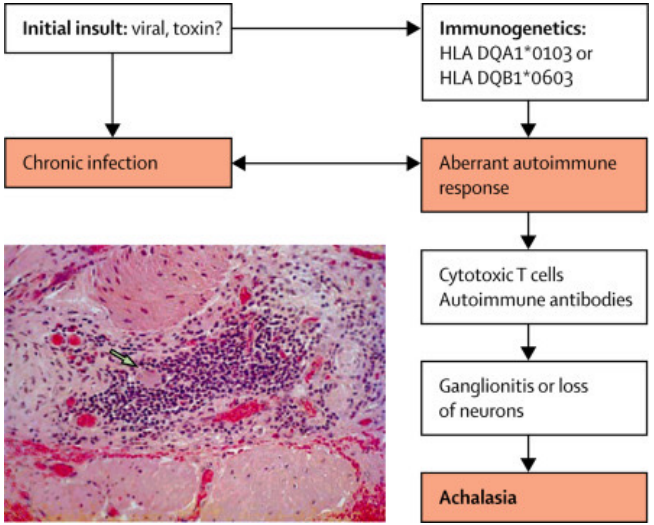
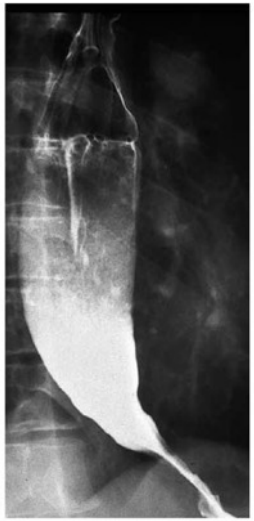
Dysmotility

- …A problem with the peristaltic function of the oesophagus, or co-ordinated relaxation of the lower oesophageal sphincter
- **Dysphagia to solids and liquids**
- Dysmotility conditions
  - Achalasia
  - Connective tissue disorders
  - Diffuse oesophageal spasm
  - Nutcracker oesophagus
- Best tests
  - Barium swallow
  - **HR manometry**

36 year old with intermittent regurgitation of food and dysphagia, chest pain after eating, and gradual weight loss. Has had a nocturnal cough for 6 months. OGD is normal. The patient is referred for barium swallow.

- Achalasia
- Rare
- Causes
  - Idiopathic
  - Pseudoachalasia
  - Chagas disease
- Loss of relaxation of LOS
- Loss of peristalsis





Achalasia (continued)

- Symptoms:
  - Dysphagia (90%) – solids and liquids
  - Regurgitation of undigested food (75-90%)
  - Respiratory complications (nocturnal cough, aspiration pneumonia) (up to 30%)
  - Chest pain (25-60%)
  - Heartburn (20-50%)
  - Weight loss (50-90%)

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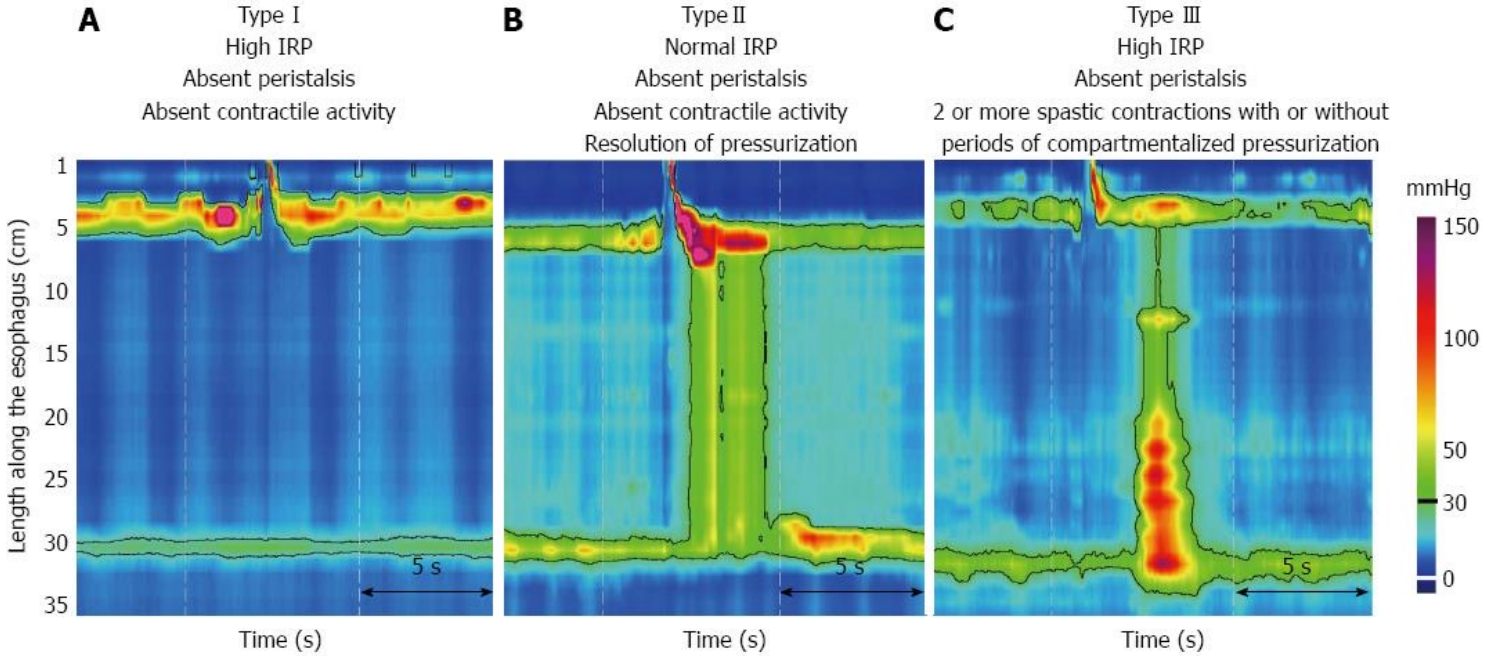
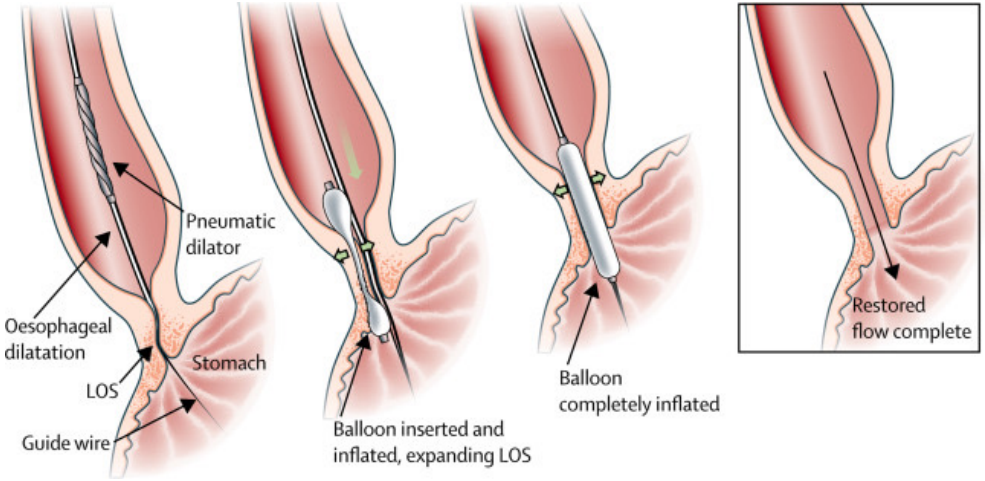
Achalasia (continued)



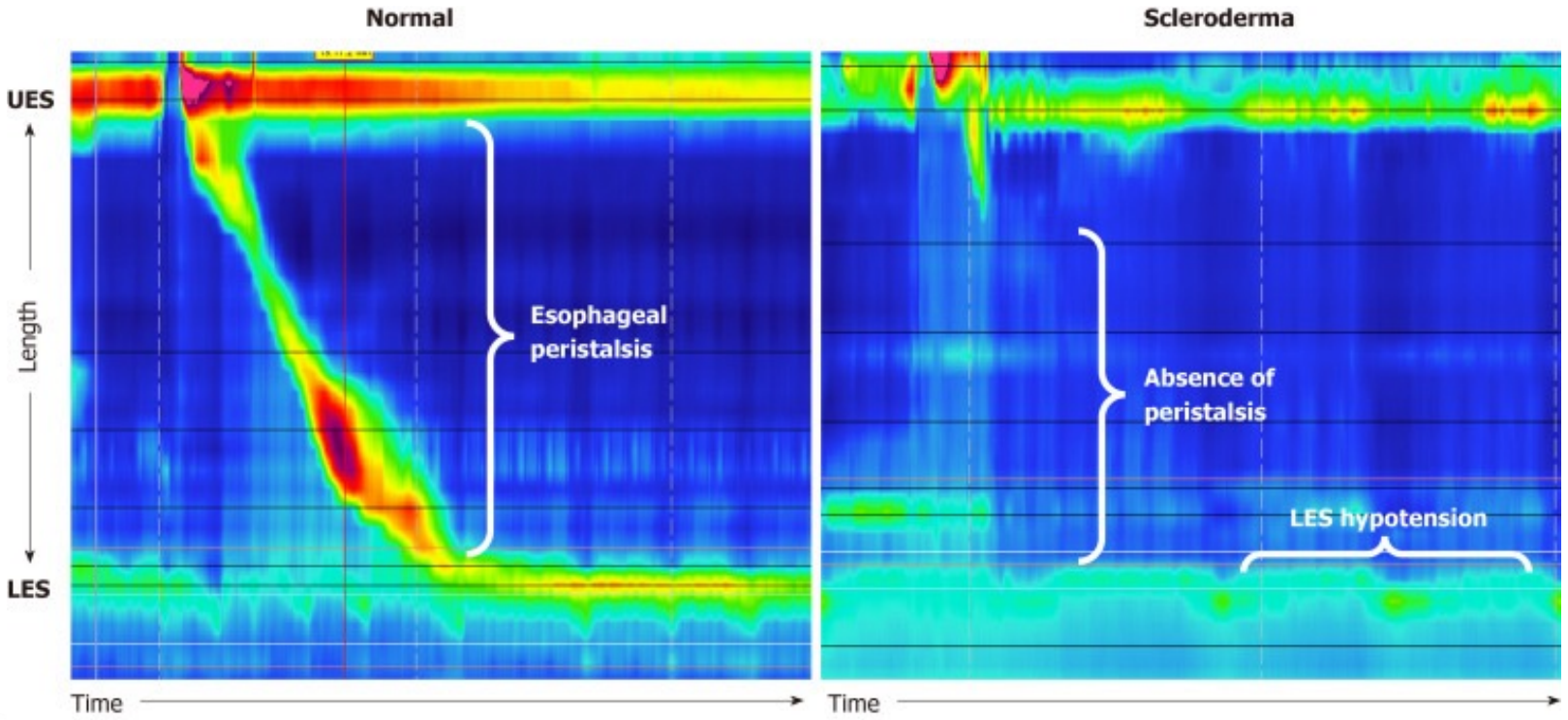
Achalasia (continued)

- Management
  - Medications
    - Nitrates
    - Calcium channel blockers
  - Botox injections
  - Pneumatic dilation
  - Hellers Myotomy +/- Nissen's fundoplication
  - POEM
  - Oesophageal resection



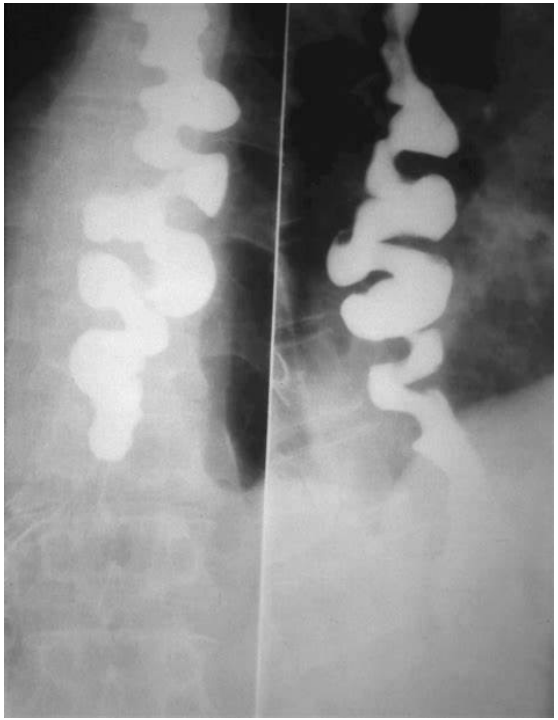
A 40 year old patient is referred to the gastroenterology clinic with 6 months of worsening GORD, which has become treatment-resistant. She has now had several episodes of dysphagia. She is also awaiting a rheumatology referral for joint stiffness and a raised ANA blood test. OGD shows oesophagitis but no cause for dysphagia is found.

Scleroderma



The patient with non-cardiac chest pain….

- Hyperactive disorders of the oesophagus:
  - Diffuse oesophageal spasm
  - Nutcracker oesophagus
- HR manometry is key
- Treatment options:
  - Medication (Nitrates, Calcium channel blockers, TCAs)
  - Botox



Dysphagia summary

- The history is **key**
- Take a **structured approach** to the patient with dysphagia
- Try to decide:
  - Is this oropharyngeal, or oesophageal dysphagia?
  - If it is oesophageal dysphagia, is it a mechanical problem, or a motility problem?
- Think about the best investigation for the patient
  - Most roads lead to upper GI endoscopy, but not all…

Live

Approach to the patient with dysphagia

End of Part 1

Dysphagia

Dr Charlie Andrews
Any questions?

Please email **charles.andrews@nhs.net**

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