

Approach to dysphagia

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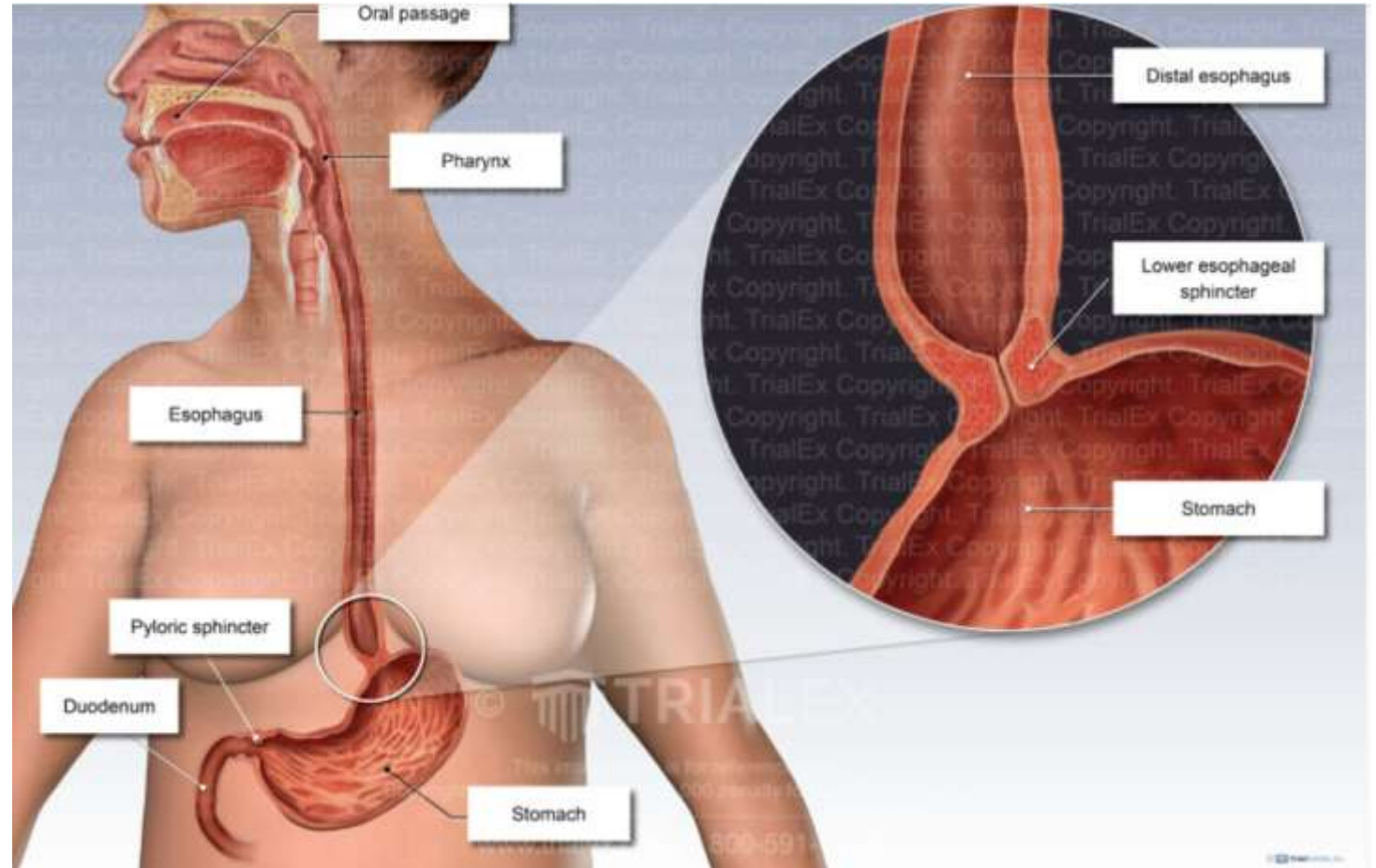
Outline

- Anatomy of oesophagus
- Blood supply and lymphatic drainage
- Definitions
- Clinical approach
- Classification and causes



Oesophagus

- The food pipe is part of the digestive system, hollow, highly distensible muscular tube, about 25 cm long, extends from epiglottis to the gastroesophageal junction.



Oesophageal sphincters



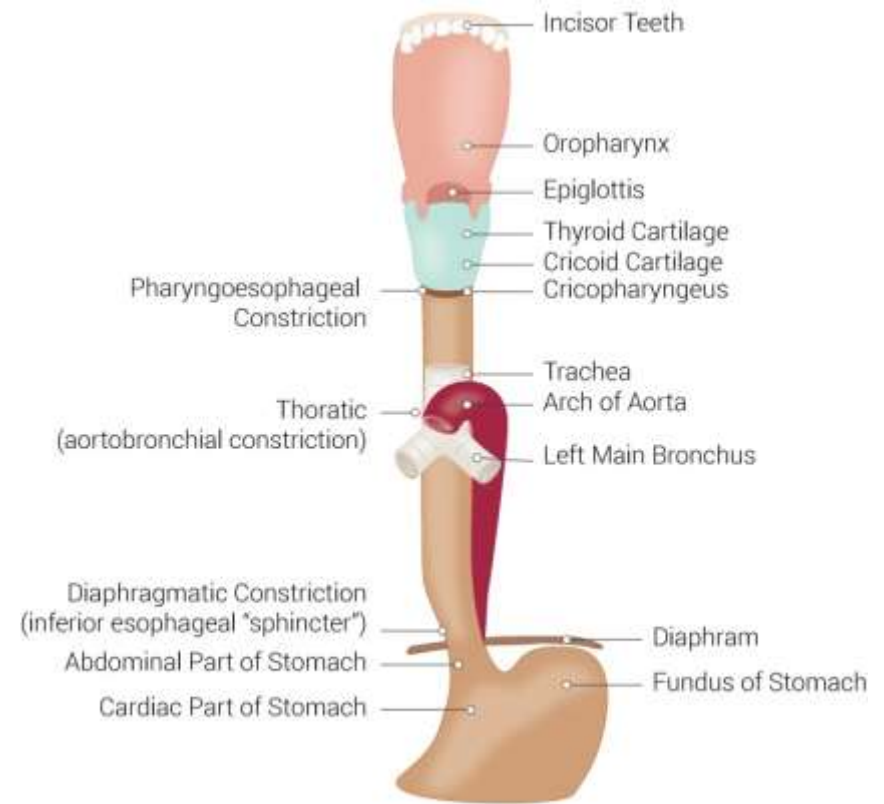
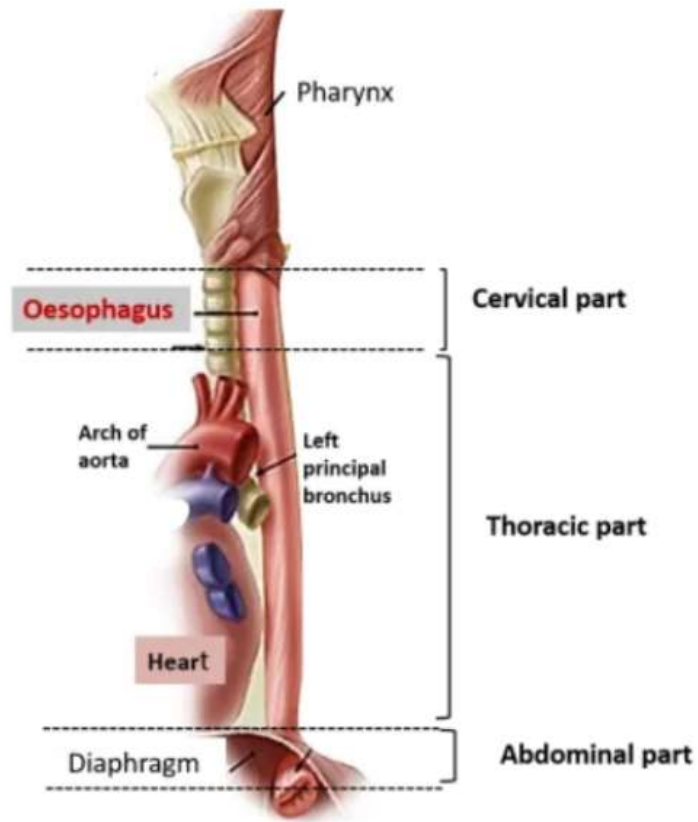
Upper oesophageal sphincter

- Cricopharyngeal + inferior pharyngeal constrictor muscles

Lower oesophageal sphincter

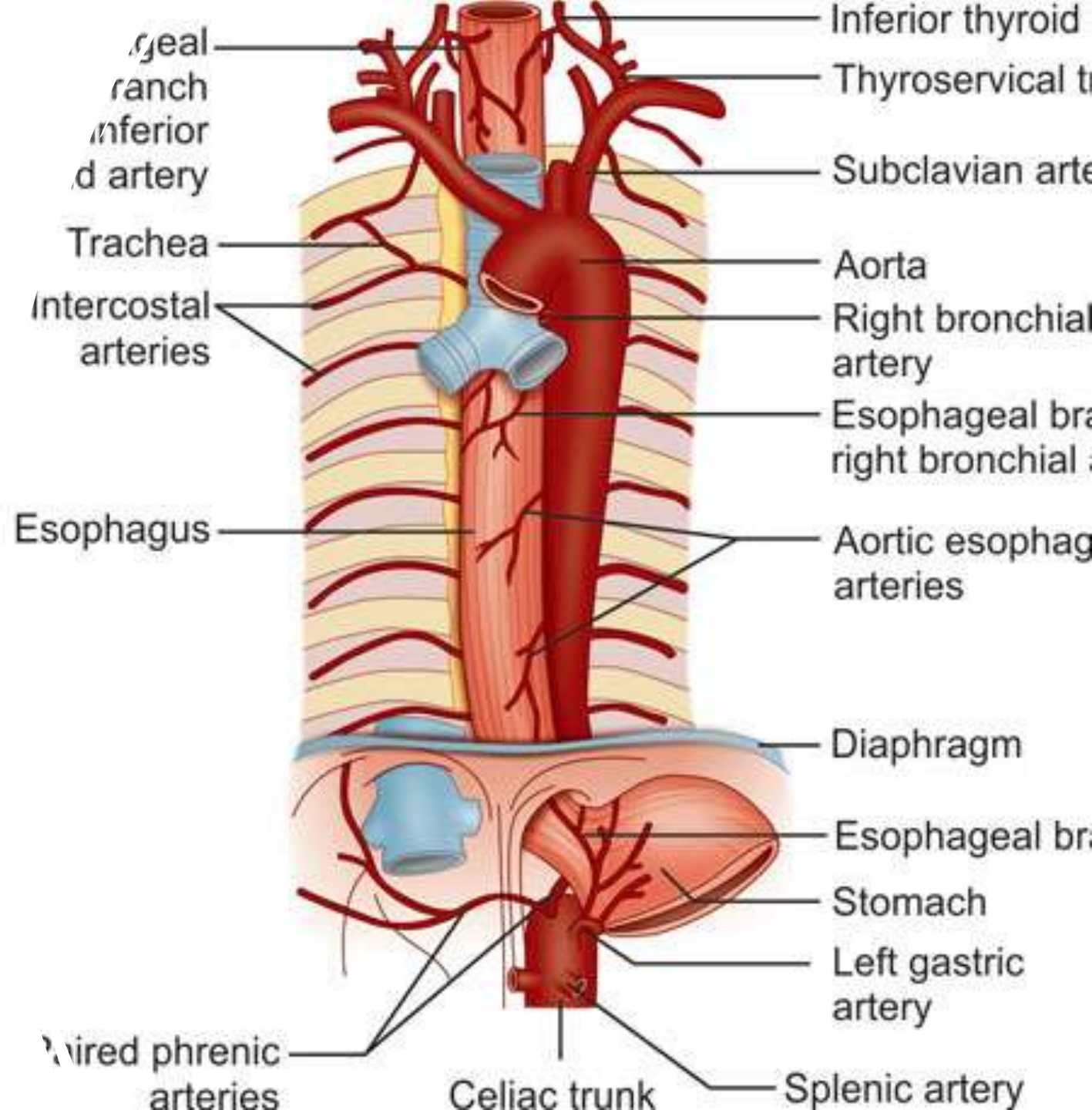
- Intrinsic oesophageal muscle (tonic contraction)
- Sling fibers of proximal stomach
- The crura of the diaphragm
- Phrenoesophageal ligament
- The transmitted pressure of the abdominal cavity

3 parts and 3 sites of constriction



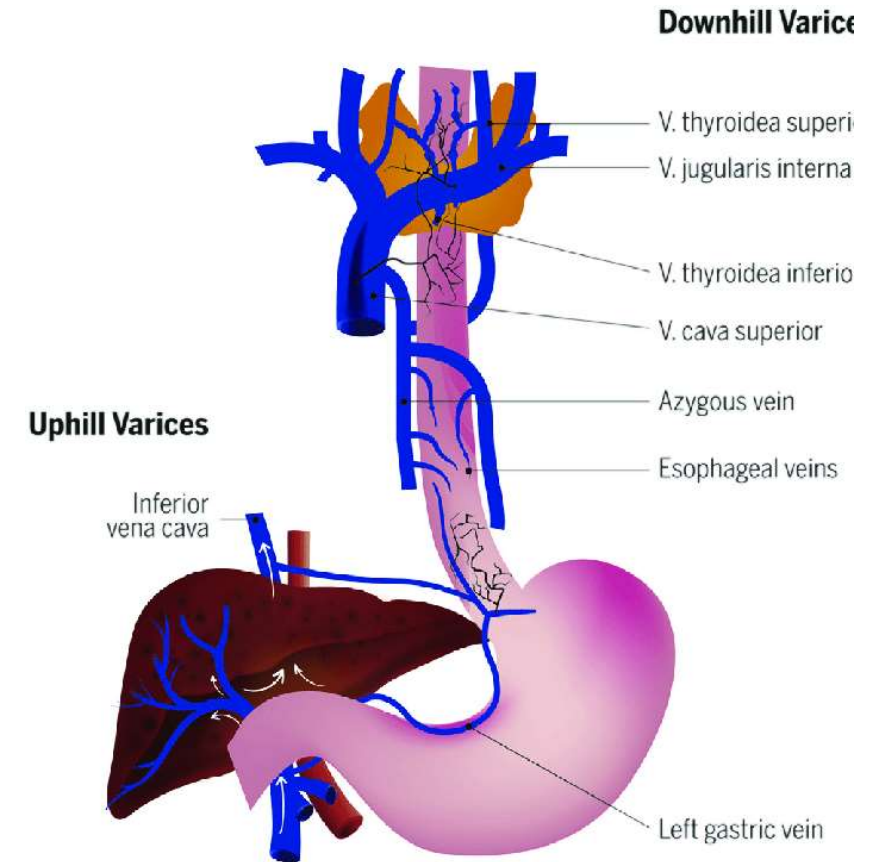
Arterial supply

- Cervical part is supplied by inferior thyroid arteries
- Thoracic part is supplied by oesophageal branches of Descending thoracic aorta, and Bronchial arteries
- Abdominal part is supplied by oesophageal branches of Left gastric artery, and Left inferior phrenic artery



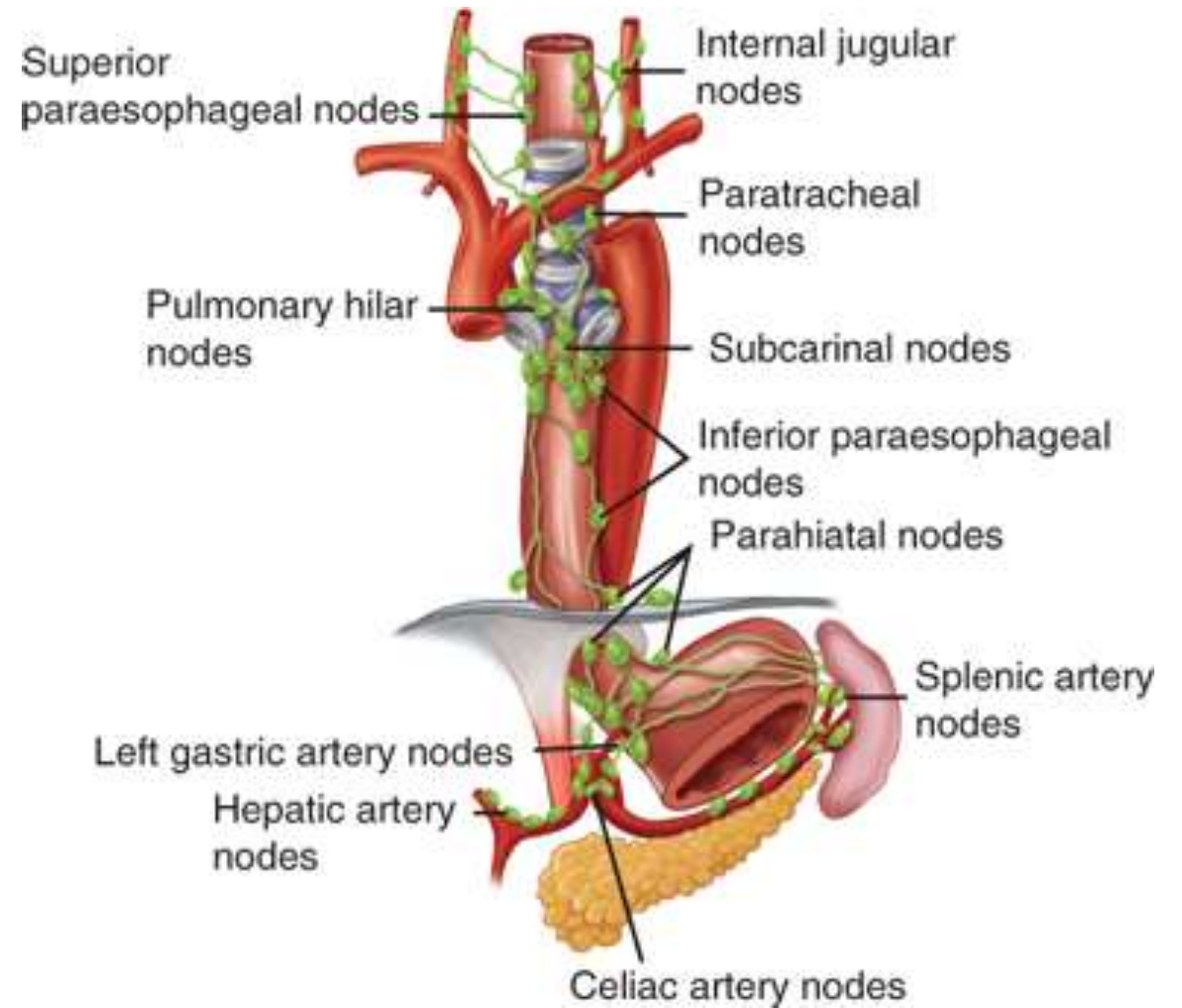
Venous drainage

- Cervical part is drained by inferior thyroid veins
- Thoracic part is drained by Azygos and Hemiazygos veins
- Abdominal part is drained by 2 venous channels
 - Hemiazygos vein, a tributary of inferior vena cava
 - Left gastric vein, a tributary of portal vein



Lymphatic drainage

- From cervical part, the lymph is drained into deep cervical lymph nodes
- From thoracic part, the lymph is drained into posterior mediastinal lymph nodes
- From abdominal part, the lymph is drained into left gastric lymph nodes



Deglutition

The action or
process of
swallowing

Stages of swallowing

Oral phase

- Food is chewed and mixed with saliva to form a soft consistency
- The tongue then moves the bolus towards the back of the mouth

Pharyngeal phase

- The vocal folds close to keep food
- The larynx rises inside the neck and the epiglottis moves to cover it, providing even more airway protection

Oesophageal stages

- The bolus moves into the oesophagus, the muscular tube that contracts to push the bolus into the stomach



Definitions

Dysphagia: A subjective sensation of difficulty or abnormality of swallowing

Odynophagia: Pain with swallowing

Globus sensation: non-painful sensation of a lump, tightness, foreign body or retained food bolus in the pharyngeal or cervical area



Age of onset

- Dysphagia in older adults should NOT be attributed to normal aging, aging causes mild oesophageal motility abnormalities, which are rarely symptomatic.

Acute dysphagia



The acute onset of inability to swallow solids and/or liquids, including secretions, suggests impaction of food or foreign body in the oesophagus and requires immediate attention



Food impaction is the most common cause for acute onset of dysphagia in adults



Clinical presentation: patients usually develop symptoms after ingesting meat, which completely obstructs the esophageal lumen, resulting in apprehension and expectoration of saliva



Acute dysphagia

- Management :
 - Administration of glucagon IV can be initially attempted to relax the lower esophageal sphincter and promote passage of the food bolus
 - Removal of food impaction during upper endoscopy using grasping devices or it can be gently pushed into the stomach using the endoscope

Evaluation of nonacute dysphagia

Distinguishing oropharyngeal from oesophageal dysphagia

- Oropharyngeal dysphagia
 - Patients have difficulty initiating a swallow or report food getting stuck immediately after a swallow
 - Patient may point toward the cervical region as the site of their symptoms
 - Swallowing may be accompanied by nasopharyngeal regurgitation, aspiration and a sensation of residual food remaining in the pharynx
 - Oral dysfunction can lead to drooling, food spillage, sialorrhea, piecemeal swallows, and dysarthria
 - Pharyngeal dysfunction can lead to coughing or choking during food consumption and dysphonia
- Oesophageal dysphagia
 - Difficulty swallowing several seconds after initiating a swallow
 - Sensation the food and/or liquids are being obstructed or delayed in their passage from the upper oesophagus to the stomach
 - Patients may point to the suprasternal notch or to an area behind the lower part of the sternum as the site of obstruction

Evaluation of nonacute dysphagia

Characterizing the symptoms

- Solid, liquid, or both?
 - Dysphagia to both solids and liquids from the onset of symptoms is probably due to a functional disorder of the oesophagus
 - Dysphagia to solids only is usually present when the oesophageal lumen is narrowed to 13 mm or less
- Progressive or intermittent?
 - Progressive dysphagia, beginning with dysphagia to solids followed by dysphagia to liquids is usually caused by a peptic stricture or obstructing lesion
 - Intermittent dysphagia may be related to a lower esophageal ring or web, patients with motility disorder may also exhibit progressive dysphagia or intermittent or nonprogressive dysphagia

Evaluation of nonacute dysphagia

- Associated symptoms
 - Heartburn
 - Weight loss
 - Hematemesis
 - Anaemia
 - Regurgitation of food particles
 - Respiratory symptoms

testing

Pre-endoscopy barium oesophagram

We perform a barium swallow as the initial test in patients with the following

- History/ clinical features of proximal oesophageal lesion
- Known complex stricture

In these patients, the blind intubation of the proximal oesophagus during upper endoscopy may be associated with the risk of perforation due to upper oesophageal pathology

Approach to diagnostic testing upper endoscopy

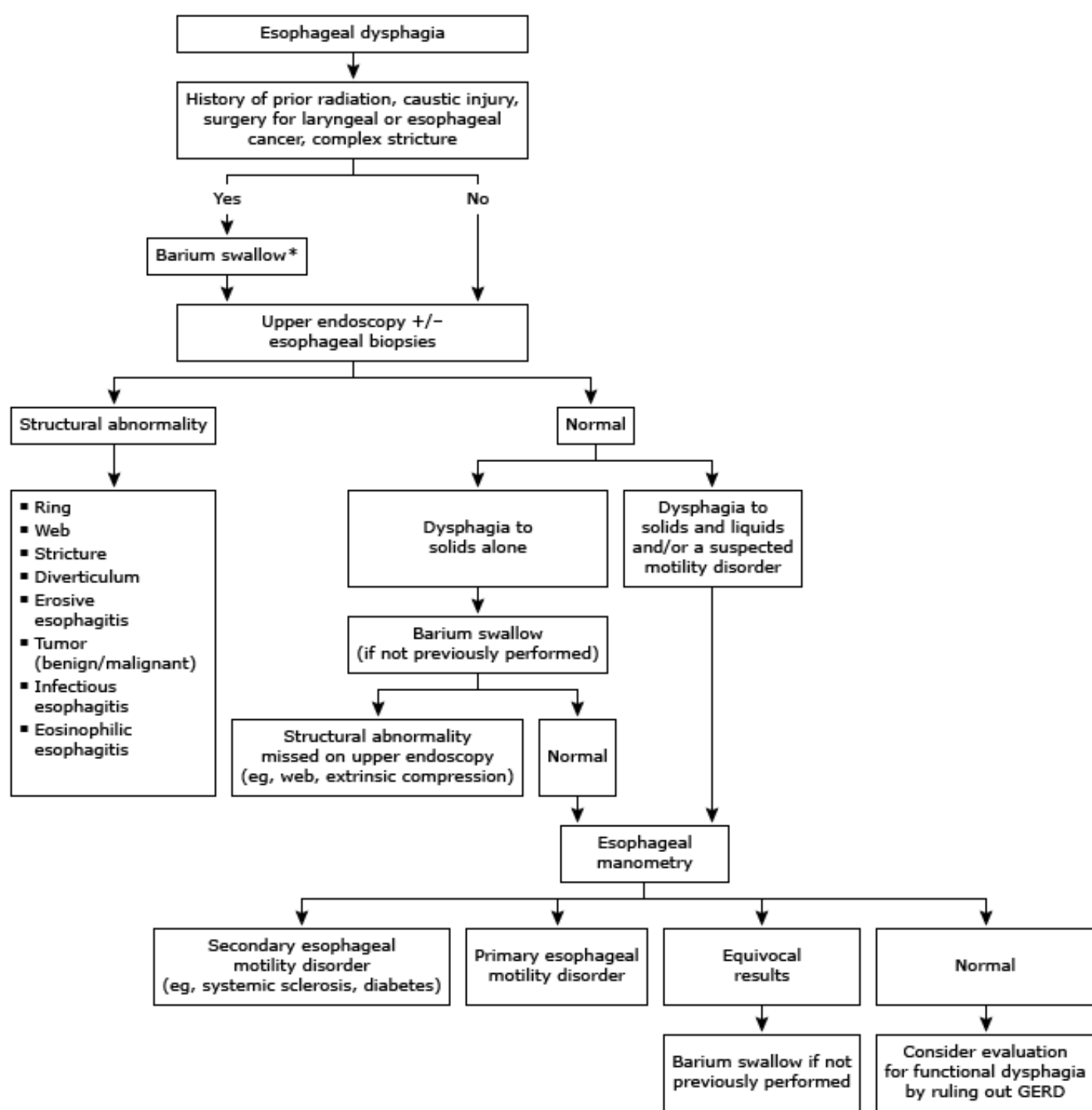
Patients with oesophageal dysphagia should be referred for an upper endoscopy to determine the underlying cause, exclude malignancy, and perform therapy if needed

testing post-endoscopy barium esophagram

We obtain a barium esophagram after a negative upper endoscopy in patients in whom a mechanical obstruction is still suspected, as subtle lower oesophageal rings or extrinsic oesophageal compression can be missed by an upper endoscopy

Approach to diagnostic testing oesophageal manometry

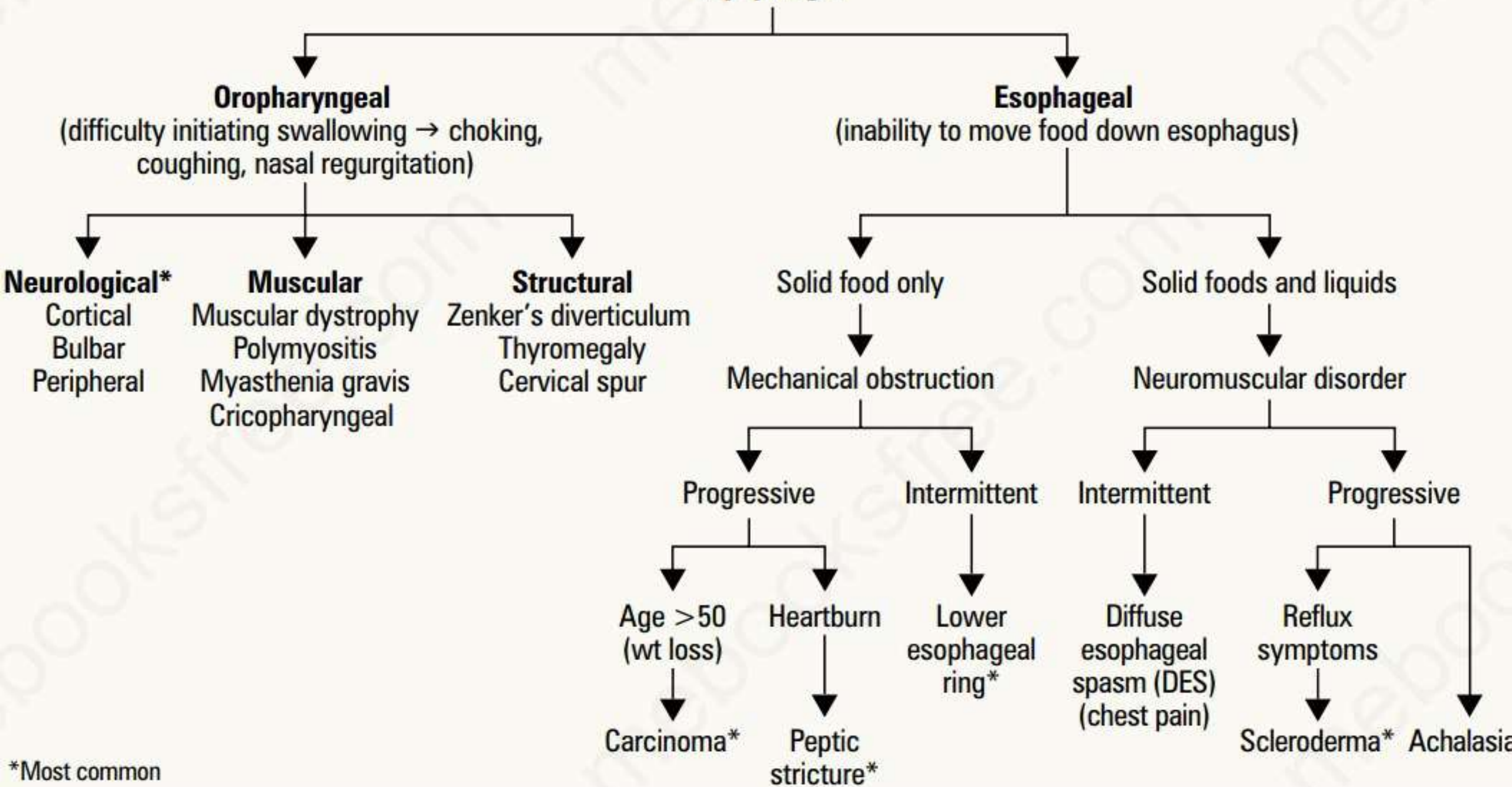
Should be performed in patient with dysphagia in whom upper endoscopy is unrevealing and/or an oesophageal motility disorder is suspected



Classification and causes



Dysphagia



*Most common

Oesophageal Dysphagia

Solids Only

Solids and/or Liquids

Mechanical Obstruction

Motor Dysfunction

Progressive
Solids to Liquids

Intermittent

Discrete short-lived episodes of solid dysphagia in a restaurant (steakhouse syndrome)

Oesophageal (Schatzki ring)

Intermittent

Progressive

Severe chest pain
Regurgitation ±

Diffuse Oesophageal Spasm

Slow reflux ±

Rapid weight loss ±

Chest pain +
Regurgitation ++
Respiratory Sx
Weight loss

CVD or
Raynaud
Chronic heartburn

Peptic Stricture

Malignancy

Achalasia

Scleroderma

Oropharyngeal vs. Oesophageal Dysphagia

- In **Oropharyngeal dysphagia**, there is difficulty in preparing and transporting the food bolus through the oral cavity as well

As initiating the swallow.

This may be associated with aspiration or nasopharyngeal regurgitation.

- In **Oesophageal dysphagia**, patients complain of food sticking in their lower throat, neck, retro-sternal discomfort or epigastrium.



- Functional
- Anatomical
 - Intrinsic
 - Extrinsic

Esophageal dysphagia can be caused by a change in the ability of the esophagus to fully open during swallowing, resulting in a blockage of bolus passage. A change in the structure of the esophagus may be caused by a luminal stenosis or narrowing or by a luminal deformity such as another structure compressing it, thereby limiting its ability to open.

TABLE 1: CAUSES OF DYSPHAGIA IN THE ELDERLY

Oropharyngeal	Oesophageal
<p><u>Mechanical</u></p> <p><u>Extrinsic</u></p> <p>Goitre</p> <p>Cervical osteophytes</p> <p>Neck cancer</p>	<p><u>Intrinsic lesion</u></p> <p>Tumours—benign/malignant</p> <p>Webs and rings</p> <p>Strictures</p> <p>Foreign bodies</p>
<p><u>Intrinsic</u></p> <p>Post-cricoid cartilage web</p> <p>Zenker diverticulum</p>	<p><u>Extrinsic lesion</u></p> <p>Mediastinal tumour</p> <p>Aberrant subclavius</p> <p>Right atrial dilatation</p>
<p><u>Neurogenic</u></p> <p>Strokes</p> <p>Cerebral neoplasm</p> <p>Head injury</p> <p>Alzheimer's disease</p> <p>Parkinson's disease</p> <p>Multiple sclerosis</p> <p>Pseudobulbar/Bulbar palsy</p> <p>Medicine with central nervous system side effects</p>	<p><u>Neuromuscular (motility)</u></p> <p>Achalasia</p> <p>Diffuse oesophageal spasm</p> <p>Scleroderma</p> <p>Chagas disease</p> <p>Diabetes mellitus</p> <p>Radiation oesophagitis</p>
<p><u>Neuromuscular junction</u></p> <p>Myasthenia gravis</p> <p>Eaton-Lambert syndrome</p>	
<p><u>Muscular</u></p>	

Oesophageal Tumour

- Malignant Tumour
- Dysphagia is the presenting complaint in 80-90% of patients.
- Any adult with progressive dysphagia is a red flag and need barium and esophagoscopy to rule out CA.
- Associated symptoms: weight loss, odynophagia, chest pain

- Benign Tumour
- Ex: Leiomyomas "mc benign oesophageal tumour"
- Large tumour cause dysphagia associated with retrosternal pressure and pain.
- Investigation: Barium swallow and esophagoscopy to rule out CA.
- Treatment: enucleation

Esophageal webs and rings

- The esophagus may be narrowed by a band of tissue composed of mucosa and submucosa. This type of lesion is called a **ring** when located at the esophagogastric junction and a **web** when located elsewhere in the esophagus .
- Webs and rings typically produce dysphagia for solids only.
- Patients often report that symptoms are intermittent.
- Schatzki's rings are the most common bandlike constriction of the esophagus. This lesion is typically symmetric and located at the esophagogastric junction

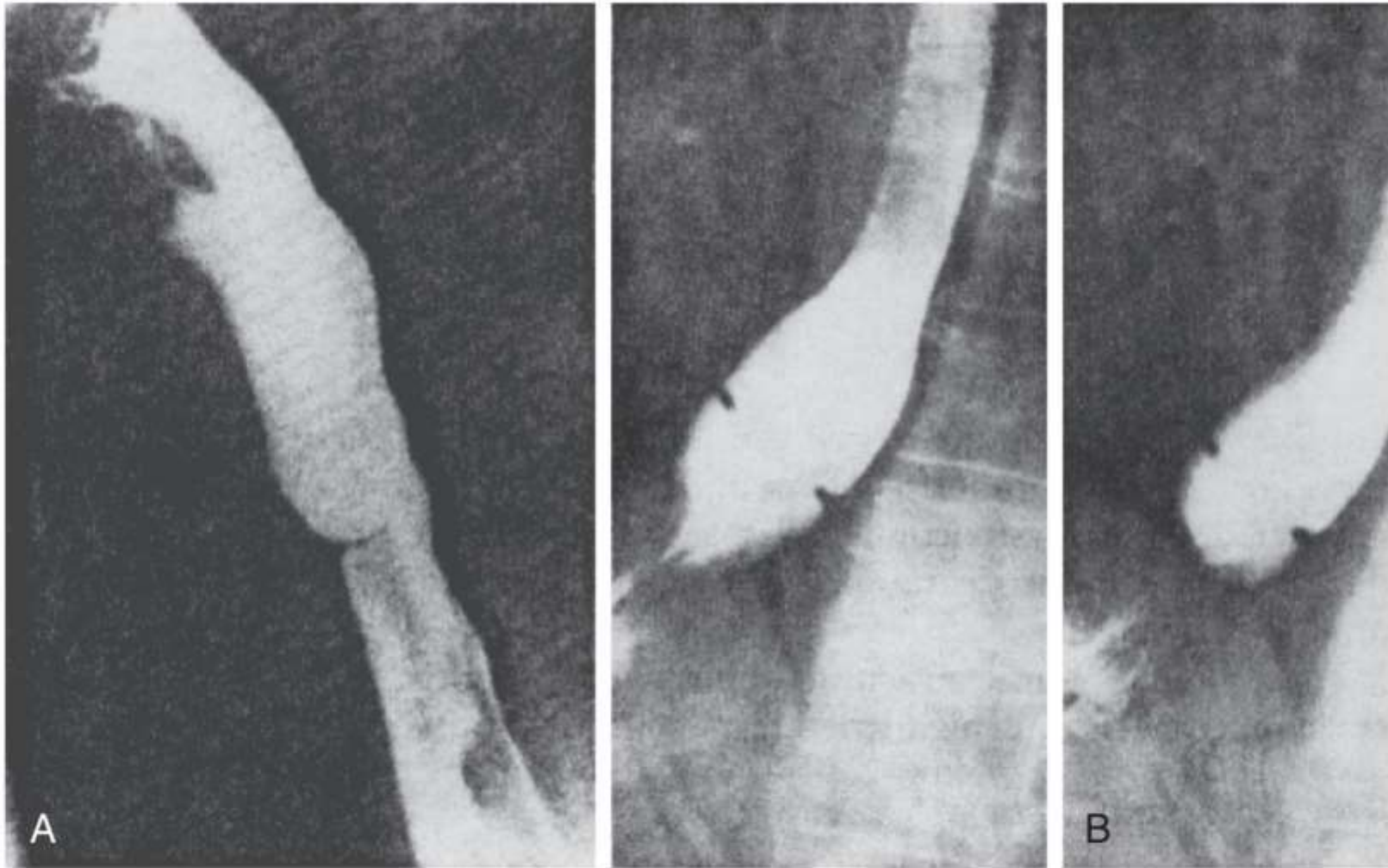


FIGURE 5-1 Thin, bandlike stenotic lesions are generally referred to as rings when located at or near the esophagogastric junction and webs when located elsewhere in the esophagus. **A**, A web is located at the pharyngeal esophageal segment. **B**, Schatzki's ring located at the esophagogastric junction. The webs are seen as darkened lines (slits) on the white barium column. (Courtesy Bronwyn Jones, MD.)



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- Treatment of webs or rings involves dilatation or rupture of the ring .
 - Complete, or nearly complete, symptomatic relief can be anticipated.
 - Dilatation may provide permanent relief, although a large proportion of patients need periodic redilatation at variable intervals.

Eosinophili C Esophagitis

- Patients who complain of persistent solid food dysphagia, usually without pain or regurgitation and with a history of allergies such as hay fever, asthma, or allergic rhinitis, may have an abnormal build-up of eosinophils that interfere with the ability of the esophagus to move in a normal pattern.
- More frequently in males than Females.
- Diagnosis usually is confirmed by biopsy and Often needs to be considered when other disorders that Precipitate solid food dysphagia have been ruled out.

Treatment may involve:

1. Diet modification.
2. Elimination of the offending allergen.
3. Topical corticosteroids .
4. Dilatation of stricture if necessary.



Strictures

Strictures are rarely seen in children, although congenital

strictures do occur. The majority of benign esophageal

strictures are acquired in adulthood as a consequence of

esophagitis.

Dysphagia is progressive, with episodes becoming more frequent and severe over a period of months or years. As luminal narrowing increases, the patient reports trouble swallowing food that previously caused no difficulty.

Stenosis occasionally can become so severe that even thick liquids cause symptoms of chest pain, odynophagia, heartburn, and dysphagia may be present.





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- ❖ Stricture is seen as a narrowed segment of esophageal lumen that may range from 1 cm to many centimeters long.
 - ❖ The stricture usually is smooth and gradually tapering, with a symmetric lumen.
 - ❖ Management requires both treatment of the underlying inflammation and dilation of the stricture.

Liquids
Alone or
with Solid
Dysphagia



Achalasia

-
- Uncommon Disease that occurs at any age, but most commonly diagnosed between the ages of 25-60 years old
 - Males & Females affected equally
 - Disease of unknown aetiology
 - Loss of peristalsis in distal oesophagus & failure of LES relaxation with swallowing
 - Most common symptoms include:
 1. Dysphagia to solids (91%)
 2. Dysphagia to liquids (85%)
 3. Regurgitation of bland, undigested food

- Diagnosis & Findings

1. Upper Endoscopy

- Done to rule out pseudoachalasia
- Done in patients with no evidence of mechanical obstruction

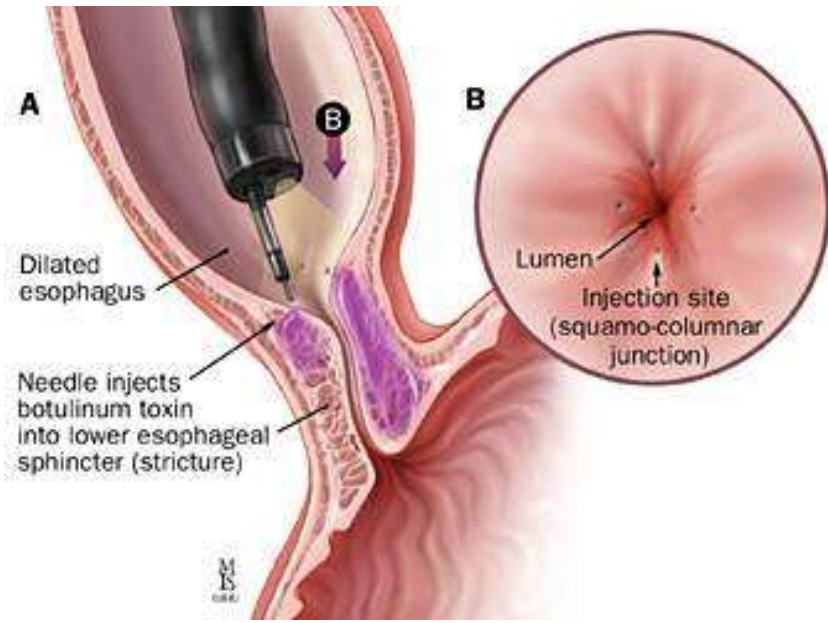
2. Barium Oesophogram

- Dilated oesophagus that terminates in a beak-like narrowing
"Bird Beak Appearance"
- Aperistalsis
- Poor emptying of barium from the oesophagus

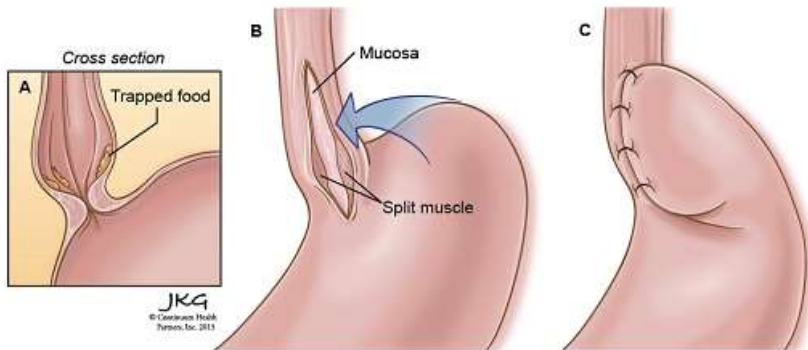
3. Functional Lumen Imaging Probe (FLIP)

- Used to evaluate patients with suspected achalasia but with inconclusive manometry





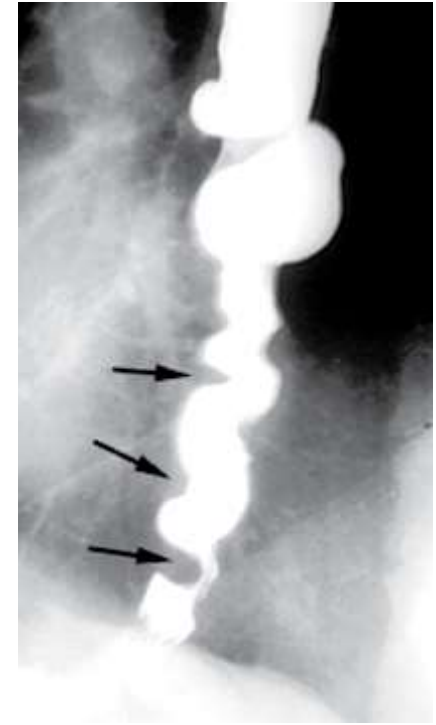
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- Surgical Candidates
 - Laparoscopic Heller Myotomy
 - Gold standard for treatment
 - Non - Surgical Candidates
 - BoTox Injection of LES



Disorders of Peristalsis

DES & Hypercontractile Oesophagus

- Can cause intermittent, nonprogressive dysphagia to solids and liquids
- Barium Oesophogram may show severe non-peristaltic contractions, such as the “Corkscrew or Rosary Bead oesophagus”
- In certain patients Barium Oesophogram is neither sensitive nor specific



EGJ Outflow Obstruction

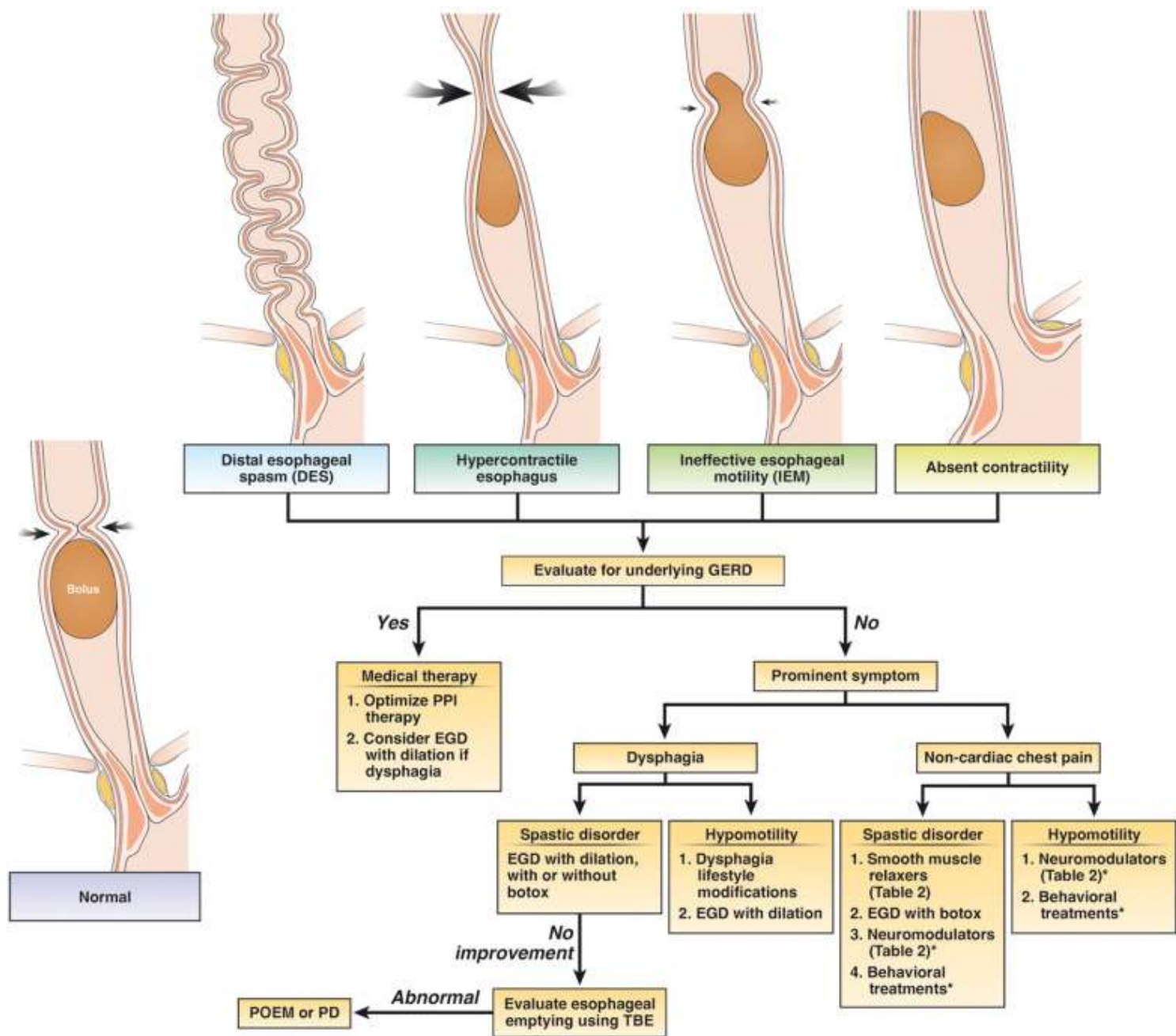
- Failure or incomplete opening of the EGJ with normal, hypercontractile, or hypocontractile peristalsis
- The underlying cause may be incompletely expressed achalasia or mechanical obstruction
- Symptoms include continuous or intermittent dysphagia for solids and liquids

Ineffective Oesophageal Motility

- It is defined as >70 percent ineffective swallows or >50 percent failed peristalsis

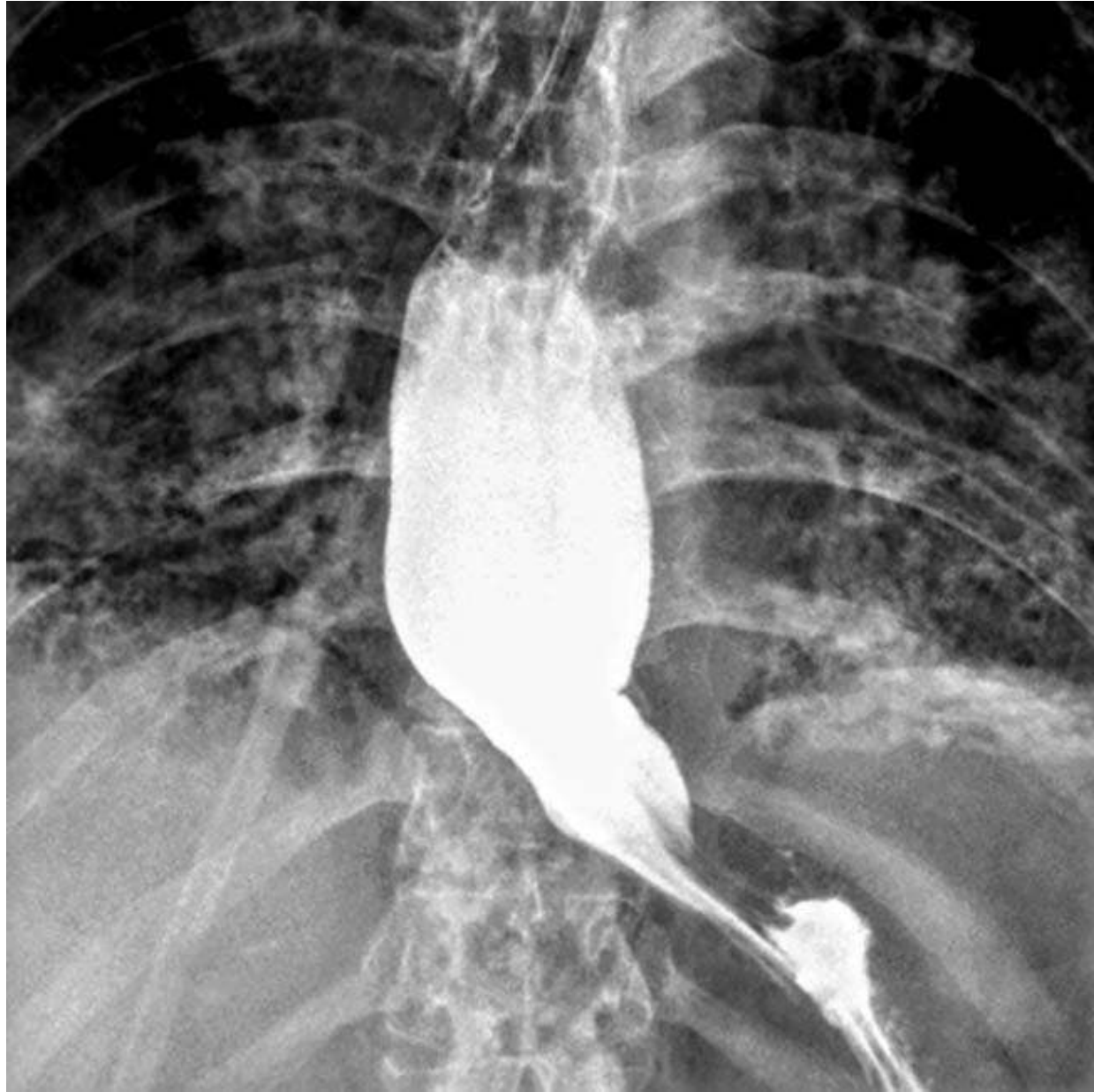
Absent Contractility

- Lack of oesophageal body peristalsis, 100% failed swallows
- It can be idiopathic or can be seen in patients with systemic disorders, such as systemic sclerosis or mixed connective tissue syndrome
- Absent contractility can lead to persistent or intermittent dysphagia for both solids and liquids



Systemic Sclerosis

-
- Patients with systemic sclerosis often have a history of heartburn and progressive dysphagia to both solids and liquids
 - Diagnosis:
 - Skin thickening & hardening (Sclerosis)
 - Supported by the presence of extracutaneous features
 - Serum Antibodies (ATA, ACA, ARA)
 - Oesophageal involvement is present in up to 90% of patients
 - Primarily involves the smooth muscle layer of the gut wall, resulting in atrophy and sclerosis of the distal two-thirds of the oesophagus



Functional Dysphagia

Rome IV Criteria

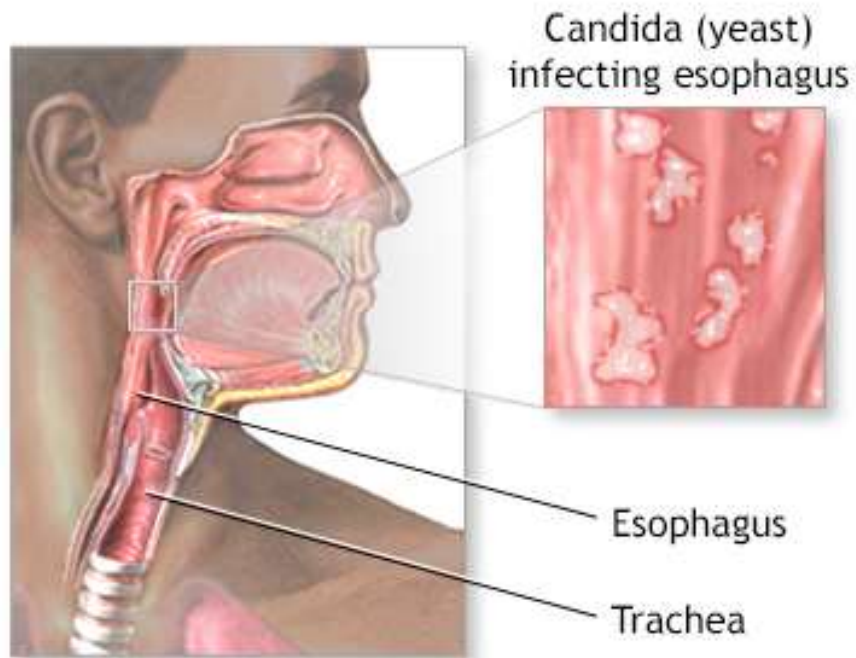
- A sense of solid and/or liquid food lodging, sticking, or passing abnormally through the oesophagus
- No evidence that an oesophageal mucosal or structural abnormality is the cause of the symptom
- No evidence that GERD or eosinophilic esophagitis is the cause of the symptom
- Absence of a major oesophageal motor disorder

-
- All criteria must be fulfilled for a period of 3 months, with the onset of symptoms being a minimum of 6 months prior to diagnosis, along with a frequency of once a week
 - Symptoms may be intermittent or present after each meal
 - Patients should be reassured and instructed to and chew well
 - In patients with severe symptoms, a trial of a smooth muscle relaxant, such as a CCB's or TCA's can be offered
 - Empiric dilation with a mechanical (push-type or Bougie) dilator can be offered, but symptom resolution is variable

Odynophagia & Dysphagia

Infectious Oesophagiti s

- Patients with IO due to HSV will usually present with odynophagia &/or dysphagia
- Other causes include CMV & Candida



ADAM.



ADAM.

Medication-Induced Oesophagitis

- Medications in pill form may become lodged in the oesophagus for a prolonged period and then cause direct oesophageal mucosal injury
- Symptoms may include dysphagia, odynophagia, and/or retrosternal pain
- Patients often have a history of swallowing a pill without water, commonly at bedtime

The background features a dense pattern of roses. The color transitions from a deep blue on the left to a warm orange on the right, with a thin white vertical line separating the two halves. The roses are rendered in a semi-transparent, embossed style.

Thank
you