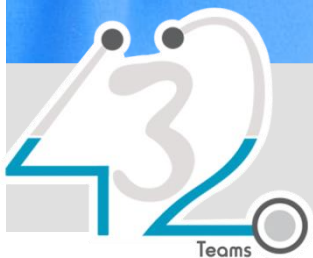


MEDICINE

432 Team

27 Approach to Dysphagia



Done By:
Fatmah Alshehry

Reviewed By:
Nadia Aljomah

جامعة
الملك سعود
King Saud University



COLOR GUIDE: • Females' Notes + pink • Males' Notes • Important • Additional

Objectives

Not given

Dysphagia:

* Sensation of obstruction of food passage.

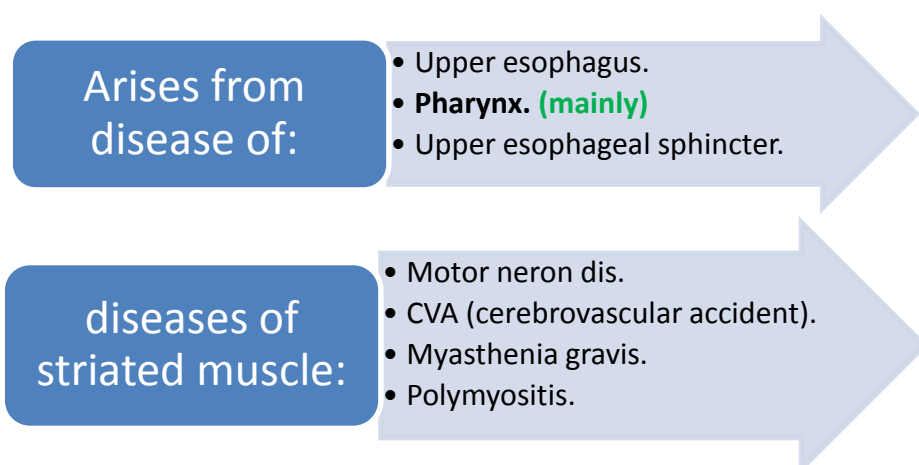
* Difficulty in swallowing.

Dysphagia is considered an alarming symptom, requiring immediate evaluation.

Classification of dysphagia:

1- *Oropharyngeal dysphagia*

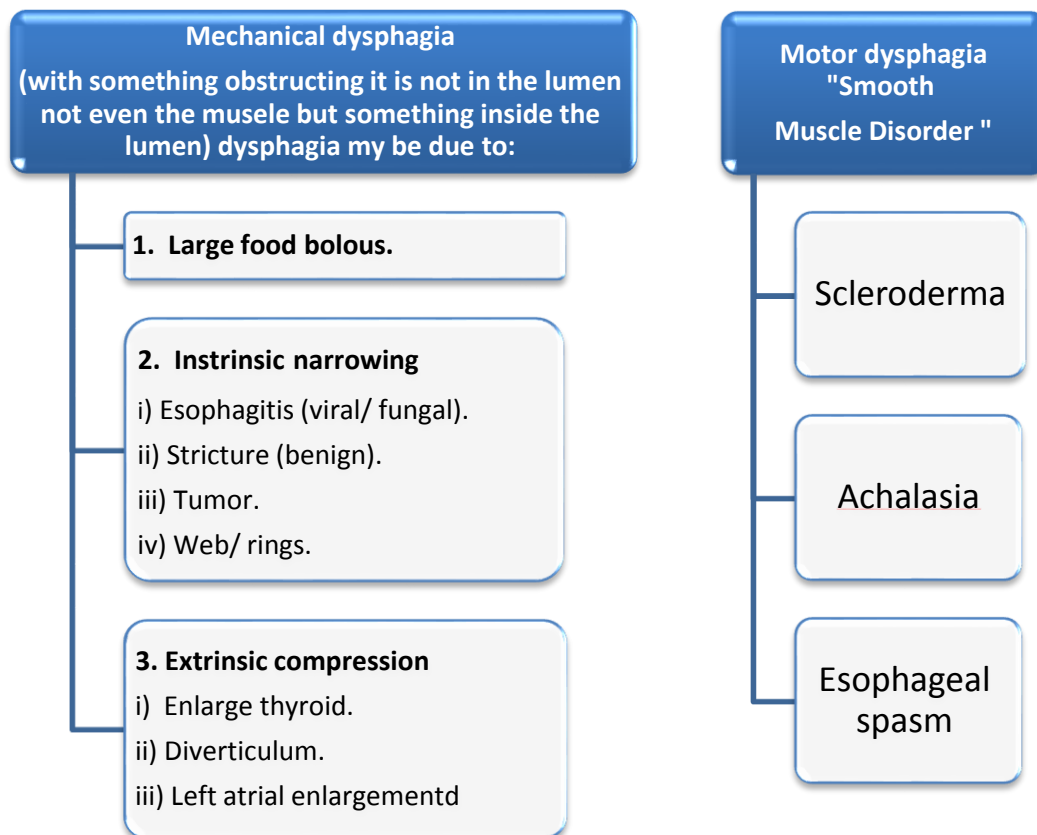
Also called *transfer dysphagia*: (usually the cause is **neurological** and sometimes it is due to stroke or hemorrhage or demyelinated disease)



2- Esophageal dysphagia arises from:

- Esophageal body.
- Lower esophageal sphincter.
- Cardiac.

It is classified into:



Questions to ask patients with dysphagia: "important"

- ✓ Do you have problems initiating a swallow or do you feel food getting stuck a few seconds after swallowing?
- ✓ Do you cough or is food coming back through your nose after swallowing?
- ✓ Do you have problem swallowing solids, liquids, or both?
- ✓ How long have you had problems swallowing and have your symptoms progressed, remained stable, or are they intermittent?
- ✓ Could you point to where you feel food is getting stuck?
- ✓ Do you have other symptoms such as loss of appetite, weight loss, nausea, vomiting, regurgitation of food particles, heartburn, vomiting fresh or old blood, pain during swallowing, or chest pain?
- ✓ Do you have medical problems such as diabetes mellitus, scleroderma, Sjogren's syndrome, overlap syndrome, AIDS, neuromuscular disorders (stroke, Parkinson's, myasthenia gravis, muscular dystrophy or multiple sclerosis), cancer, Chagas' disease or others?
- ✓ Have you had surgery on your larynx, esophagus, stomach, or spine?
- ✓ Have you received radiation therapy in the past?
- ✓ What medications are you using now (ask specifically about potassium chloride, alendronate, ferrous sulfate, quinidine, ascorbic acid, tetracycline, aspirin and NSAIDs)? (Pill esophagitis can cause dysphagia.)

4 cardinal Questions:

- Oropharyngeal or esophageal.
- Solid or solid and liquid.
- Intermittent or progressive.
- Associated symptoms.

*in some patients, there is no cause can be identified → functional dysphagia.

Physical examination:

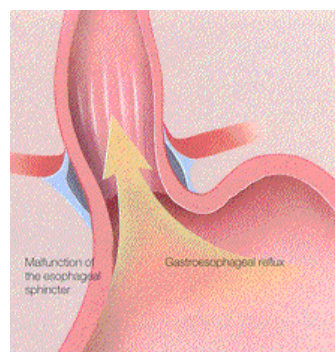
- Sign of bulbar paralysis
- Dysarthria (motor speech disorder)
- Ptosis (eyelid drooping)
- CVA
- Goiter
- Changes in skin – CTD (connective tissue disease)

Common Diseases of Esophagus:

- GERD (*Gastro-esophageal reflux disease*) is the medical term of reflux esophagitis:
 - Damaged esophageal mucosa by reflux of gastric content.

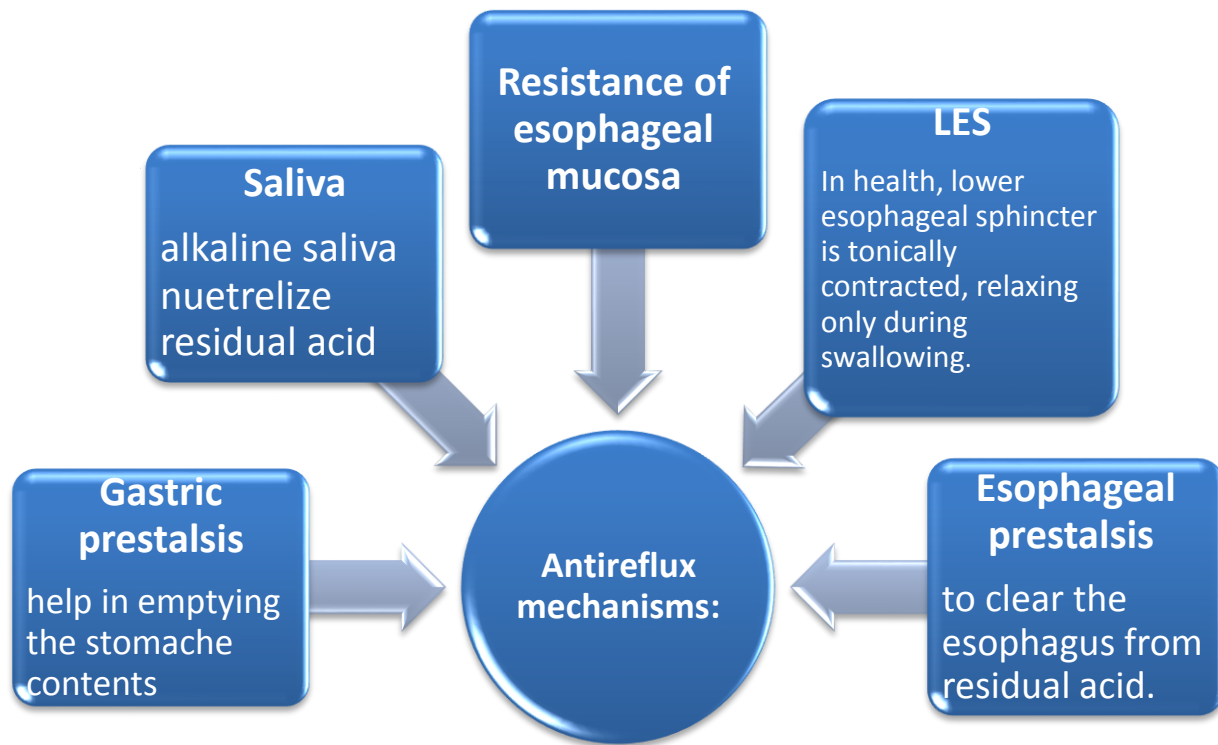
Damage depends on:

- Reflux material.
- Duration of reflux\Frequency.



GERD occurs with stomach content reflux up the esophagus

Pathophysiology:



Major Factors Involved in GERD:

- **Loss of LES pressure in:**

- TLESR "Transient lower esophageal sphincter relaxation" here the basal sphincter tone is normal but reflux occur in response to frequent episodes of inappropriate sphincter relaxation.

- Sustained.

- Increased Intra-gastric pressure.

Pregnancy and obesity are established predisposing causes.

- Scleroderma.

- Surgical resection.

- **Hiatus hernia** (5-10% of population) causes reflux because the pressure gradient between the abdominal and thoracic cavities is lost. In addition, the oblique angle between the cardia and esophagus disappears. Many patients who have large hiatus hernias develop reflux symptoms, but the relationship between the presence of hernia and symptoms is poor. Hiatus hernia is very common in individuals who have no symptoms, and some symptomatic patients have only a very small or no hernia. Nevertheless, almost all patients who develop oesophagitis, Barret's esophagus (a condition in which tissue that is similar to the lining of your intestine replaces the tissue lining your esophagus) or peptic strictures have a hiatus hernia.

- Aperistalsis "defective esophageal peristaltic activity is commonly found in patients who have esophagitis. It's a primary abnormality, since it persists after esophagitis has been healed by acid suppression drug therapy. Poor esophageal clearance leads to increased acid exposure time."

- Reduce saliva.
- Delayed gastric emptying: Mech. – obstruction. Motor "gastric emptying is delayed in patients with GERD. The reason for this is unknown."

Manifestation:

- Hurt burn
- Chest pain
- Dysphagia - complication
- Food Regurgitation

Clinical features from Davidson's:

The major symptoms are **heartburn (occurs in 90%)** and **regurgitation, often provoked by bending, straining or lying down**. "**waterbrash**" which is salivation due to reflux salivary gland stimulation as acid enters the gullet, is often present. The patient is often overweight. Some patients are woken at night by choking as refluxed fluid irritates the larynx. Others develop odynophagia or dysphagia.

Diagnosis:

- Endoscopy is the investigation of choice.

This is performed to exclude other upper GI diseases which can mimic GERD, and to identify complications.

- Barium swallow

- 24 Hours pH monitoring is indicated if the diagnosis is unclear or surgical intervention is under consideration. "A pH of less than 4 for more than 6-7% of the study time is diagnostic of reflux disease".

- Motility

Investigation from Davidson's"

Young patient who present with typical symptoms of GERD, without worrying features such as dysphagia, weight loss or anemia, can be treated empirically without investigation.

Fatty food and coffee cause lower esophageal sphincter to relax → worsening the condition

Complication:

- bleeding.
- Stricture formation. Fibrous strictures develop as a consequence of longstanding esophagitis. Most patients are elderly and have poor peristaltic activity. They present with dysphagia which is worse for solids than for liquids.
- Barrett's esophagus.

Complications from Davidson's

Iron deficiency anemia occurs as a consequence of chronic, insidious blood loss from long-standing

A pre-malignant condition in which the normal squamous lining of the lower oesophagus is replaced by columnar mucosa (columnar lined oesophagus; CLO) containing areas of intestinal metaplasia. It occurs as an adaptive response to chronic gastro-oesophageal reflux and is found in 10% of patients undergoing gastroscopy for reflux symptoms. "CLO is a major risk factor for oesophageal adenocarcinoma, with a lifetime cancer risk of around 10%." However, "Cancer risk is more closely to the severity and duration of reflux rather than the presence of CLO per se.

Treatment: (90% respond to treatment and once they stop, recurrence happens)

- Antireflux measure.
- Acid suppressing agent.
- Surgery. Patients who fail to respond to medical therapy, those who are unwilling to take long-term PPIs and those whose major symptom is severe regurgitation should be considered for laparoscopic anti-reflux surgery.
- Decrease weight
- Treat hiatus hernia
- Avoid smoking , alcohol , fatty meal and coffee can partially help

Management from Davidson's:

Lifestyle advice, including weight loss, avoidance of dietary items which the patient finds worsen symptoms, elevation of the bed head in those who experience nocturnal symptoms, avoidance of late meals and giving up smoking, are recommended but rarely heeded. PPIs are the treatment of choice. Symptoms usually resolve and oesophagitis heals in the majority of patients.

- H2-receptor antagonist drugs also help symptoms without healing oesophagitis.

Achalasia:

A motor disorder of esophageal smooth muscle Character by:

- High LES pressure that does not relax properly.
- Absent distal peristalsis.

Patho physiology:

Loss of intramural neurons of esophageal body and LES.

Pathophysiology 'from Davidson'

Achalasia is characterized by:

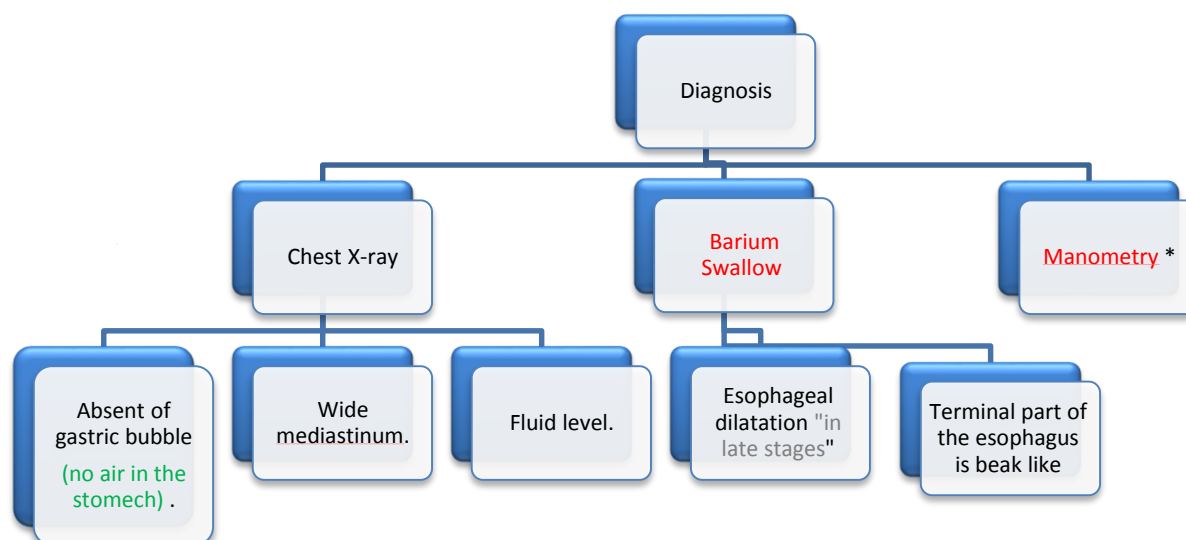
- A hypertonic lower oesophageal sphincter which fails to relax in response to the swallowing wave
- Failure of propagated oesophageal contraction, leading to progressive dilatation of the gullet.

*Clinically:

- Dysphagia – both liquid and solid.
- Regurgitation and pulmonary aspiration.
- Chest pain.

They could have cough or aspiration pneumonia or weight loss because nothing coming inside

The presentation is with dysphagia. This develops slowly, is initially intermittent, and is worse for solids and eased by drinking liquids, and by standing and moving around after eating. Heartburn does not occur because the closed oesophageal sphincter prevents gastro-oesophageal reflux. Some patients experience episodes of chest pain due to oesophageal spasm. As the disease progresses, dysphagia worsens, the oesophagus empties poorly and nocturnal pulmonary aspiration develops. **Achalasia predisposes to squamous carcinoma of the oesophagus**



***Manometry** (important to confirm the diagnosis)

Elevated LES P with no or partial relaxation amplitude contraction, no propagating (simultaneous). It confirms the high pressure, non-relaxing LES with poor contractility of the esophageal body.

Investigations from Davidson:

Endoscopy should always be carried out because carcinoma of the cardia can mimic the presentation and radiological and manometric features of achalasia ('pseudo-achalasia').

Treatment:

A) **Medical** (limited to old patient who can't stand surgery)

- Nitroglycerin.
- Ca – channel blocker.

B) **Pneumatic dilatation** (not good for very young instead we do myotomy for them because they have high muscle tone and it doesn't respond) "improves symptoms in 80% of patients. Some patients require more than one dilatation but those requiring frequent dilatation are best treated surgically".

C) **Surgical.** Surgical myotomy ('Heller's operation'), performed either laparoscopically or as an open operation, is an extremely effective, although more invasive option. Both pneumatic dilatation and myotomy may be complicated

by gastro-oesophageal reflux, and this can lead to severe oesophagitis because oesophageal clearance is so poor. For this reason, Heller's myotomy is accompanied by a partial fundoplication anti-reflux procedure. PPI therapy is often necessary after surgery.

Infectious esophagitis: (mainly viral and candida)

- A) Viral esophagitis
 - Herpes simplex.
 - Varicella Zoster.
 - CMV.
- B) Bacterial
- C) Fungal

Here endoscopy is the treatment and we do a biopsy and treat according

Patient complains of

- Dysphagia
- Odynophagia
- Bleeding

Diagnosis:

Barium swallow

Endoscopy (gold standard)

Biopsy

Diverticula: (is an out pouch that will get enlarged spatially when the patient eat this food will go to the out pouch and can compress and cause dysphagia)

Outpouchings of the wall of the esophagus.

- * **Zenker** – upper.
- * **Epiphrenic** – lower part.

Be careful when you do an endoscopy because it could perforate

Patient complains of

- Asymptomatic
- Typical
- Regurgitation of food consumed several days ago.
- Dysphagia.

Esophageal cancer:

Disease more in Males > 50 Y

Causation factors:

- Excess alcohol.
- Cigarette smoking.
- Fungal toxin.

Mucosal damage:

- Hot tea.
- Radiation induced stricture.
- Barrett's esophagus.
- Esophageal web.

Clinically:

- 15% in upper 1/3
- 45% in middle 1/3
- 40% in lower 1/3

Pathology:

Squamous cell carcinoma > 75%

Adenocarcinoma

- Progressive **solid** dysphagia
- Weight loss
- Odynophagia
- Regurgitation
- T-E Fistula

Although the incidence of squamous cell esophageal cancer has decreased over the past two decades in most Western countries and in parts of Asia, including certain high-risk areas of China

In the 1960s squamous cell esophageal cancers comprised approximately 90% of all esophageal cancers. However, because of an alarming rise in the incidence of esophageal adenocarcinoma, **esophageal adenocarcinoma is now the predominant type of esophageal carcinoma in the United States**. This reversal pattern has also been recently noted in some European countries such as Denmark and Scotland.

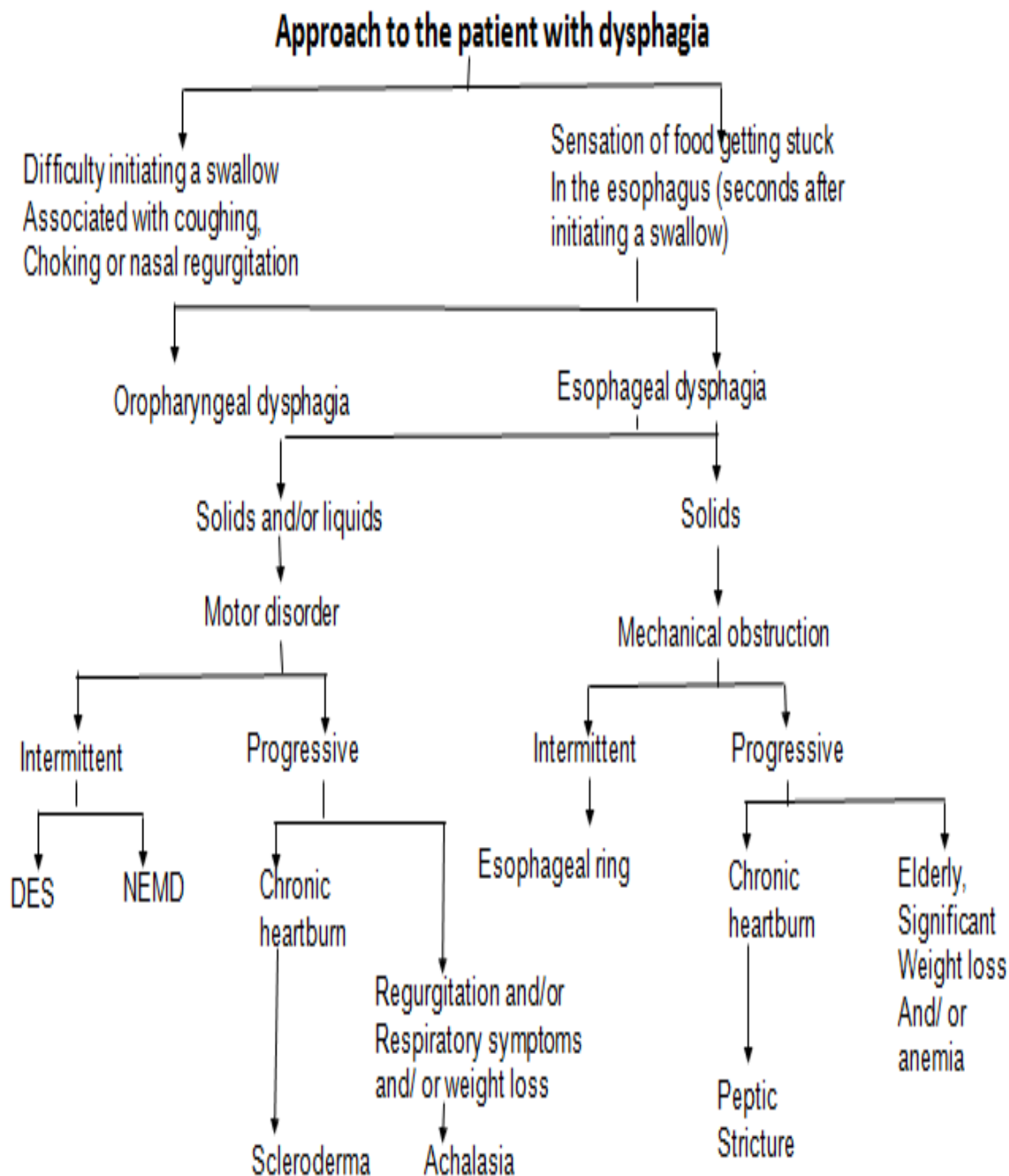
Esophageal CA / pre-op staging: (important to do endoscopy and to determine which layer is involved -extent of the cancer) (unfortunatly they present late stage 3 that is invading the muscle)

- Wall penetration
 - “High grade dysplasia” = 43% occult adeno CA
 - Tumor limited to submucosa --> 19% LN involvement
 - 3% had more than 4 nodes
 - Nodes limited to peri-esophageal, not spleen or peri-gastric => no need to resect these
 - Invasion of muscularis propria --> 80% LN involvement
- Approx. 13,000 cases/year in USA
- Post-esophagectomy overall **5 yr survival = 18%**
 - At presentation, 57% patients are Stage 3, with a 10% post-esophagectomy surv.
 - At presentation, 24% patients are Stage 2, with a 35% post-esophagectomy surv.
 - At presentation, patients who are Stage 1, have an 80% post-esophagectomy surv.

We treat it by chemotherapy and radiotherapy

Diagnosis of dysphagia:

Diagnosis of dysphagia



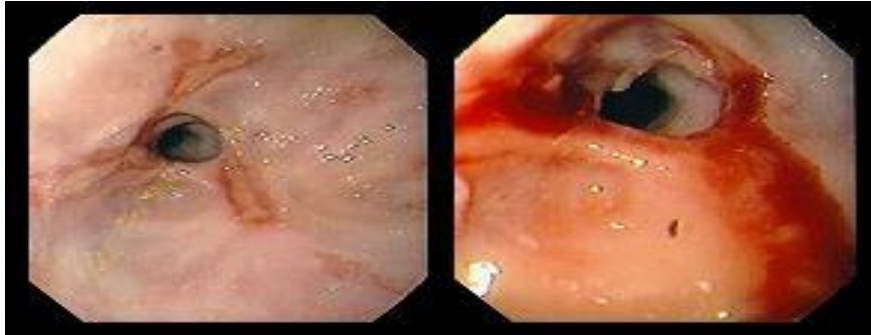
DES: diffuse esophageal spasm; NEMD: nonspecific esophageal motility disorder.

SUMMARY

- Dysphagia: Sensation of obstruction of food passage or Difficulty in swallowing.
- Classification of dysphagia: Oropharyngeal and esophageal
- Reflux esophagitis: Damaged esophageal mucosa by reflux of gastric content.
- Achalasia: A motor disorder of esophageal smooth muscle
- Infectious Esophagitis: is caused mainly by viral and candida

Questions (from 431)

Q1) Young lady presents with intermittent solid Dysphagia, what's the most likely diagnosis?



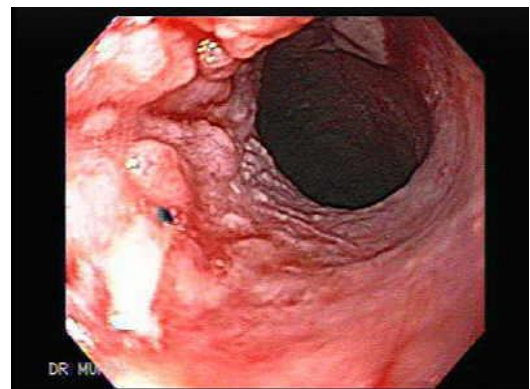
A1) Esophageal ring, which could be due to reflux disease or congenital

Q2) Young lady presents with progressive dysphagia to solid and liquid, weight loss. What is the most likely diagnosis?



A2) Achalasia

Q3) Old man presents with progressive dysphagia to solid only with weight loss. What is the most likely diagnosis?



A3) Malignancy; a tumor in the lower esophagus

432 Medicine Team Leaders

Raghad Al mutlaq & Abdulrahman Al Zahrani

For mistakes or feedback: medicine341@gmail.com