SURGERY

PrepLadder

NEET SS

VOLUME 2

PREFACE

Dear Dreamer,

Pat your back and reward yourself, today you've taken an important step towards reaching your dream. Mark Twain said, "the secret of getting ahead is getting started". You have started in the right direction.

The next few months until your targeted exam or exams are crucial. Every moment counts and each step you take now, will help you reach your goal, your dream.

PrepLadder is your partner in this journey. We are in this together. So, don't worry, do not stress. Just focus on your preparation and stay positive. Set daily targets, achievable and realistic ones. If you pass the target, celebrate. However, if you miss a daily target, forgive yourself, move on and do better the next day.

Always remember that you are special and unique. Do not compare your preparation, your speed, your abilities with others. Believe us, it doesn't help.

Practice a lot. Solve the QBank. Take Grand Tests. Review your performance. But don't let ranks and results drag you down. Rather use them as a guiding light to know your strengths and weaknesses, to increase your speed and accuracy, and to get yourself ready for the exam day.

If you have a doubt or a question, ask us. We are here.

Lastly and most importantly. take care of yourself. You and your health are precious. So, keep up with exercise, eat healthy, get enough sleep and care for yourself.

We're behind you, cheering you on to the finish line. You might be feeling stressed, overwhelmed, and so tired, but you're nearly there. Give it everything you've got, and know that whatever happens next, you've got what it takes for the life you want. You are a Champion.

Own Your Dream
Team PrepLadder

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GIT, HEPATOBILIARY & PANCREATIC SURGERY

1 MOTILITY DISORDERS OF ESOPHAGUS

Introduction

- The most common motility disorders and most common hypomotility disorders are achalasia cardia.
- The most common and most painful hypermotility disorder is the nutcracker's esophagus.

Clinical Features

00:01:00

- Dysphagia
- Chest pain
- Heartburn
- Regurgitation
- Weight loss

Diagnosis

- In esophageal motility disorder, the diagnosis is made by manometry. The manometry findings exceed two standard deviations from the normal.
- Chicago classifications best classify esophageal motility disorders. This classification is derived from data obtained from high-resolution manometry with esophageal pressure topography.

The Chicago classification of esophageal motility, v3.0

Criteria	
Achalasia and Esophagogastric Junction Outflow Obstruction	
• Type I achalasia (classic)	• Median IRP >15 mm Hg, 100% failed peristalsis (DCI <100 mm Hg-s-cm); premature contractions with DCI <450 mm Hg-s-cm satisfy criteria for failed peristalsis
• Type II achalasia (with esophageal compression)	• Median IRP >15 mm Hg; 100% failed peristalsis, panesophageal pressurization with ≥20% of swallows
• Type III achalasia (spastic achalasia)	• Median IRP >15 mm Hg; no normal peristalsis, spastic contractions with DCI >450 mm Hg-s- cm with ≥20% of swallows
• Esophagogastric junction outflow obstruction (achalasia in evolution)	• Median IRP >15 mm Hg; sufficient evidence of peristalsis such that criteria for types I-III are not met
Major Disorder of Peristalsis	
• Absent contractility • Distal esophageal spasm • Hypercontractile esophagus (nutcracker or jackhammer)	• Normal median IRP, 100% failed peristalsis • Normal median IRP, ≥20% premature contraction with DCI >450 mm Hg-s-cm • At least 2 swallows with DCI >8000 mm Hg-s-cm
Minor Disorders of Peristalsis	
• Ineffective esophageal motility • Fragmented peristalsis	• ≥50% ineffective swallows • ≥50% fragmented contractions with DCI >450 mm Hg s-cm
Normal esophageal motility	• None of the above criteria are met

- Integrated relaxation pressure is the mean of the 4 seconds of maximal deglutitive relaxation in the 10-second window beginning at the upper esophageal sphincter relaxation referenced to gastric pressure. Distal contractile integral is the amplitude× duration × length (mm Hg cm) of the distal esophageal contraction exceeding 20 mmHg from the transition zone to the proximal margin of lower esophageal sphincter.
- In high-resolution manometry, the pressure sensors are no more than 1 cm apart rather than 3-5 cm. Up to 36 sensors are distributed longitudinally and radially, allowing a 3D special pressure map to be drawn during deglutition. This graphic representation is referred to as esophageal pressure topography.

Presenting components of named esophageal motility disorder

- These are vague and non-specific exclude the disease of the other organ system.
- Timed barium esophagogram: Images are taken in one minute, two minutes, and five minutes. It is helpful in the evaluation of patients with suspected achalasia.
- Upper GI endoscopy is performed to rule out mucosal abnormalities. It is going to provide improved visualization of defects.
- CT Chest and abdomen in case of suspicion of extrinsic cause responsible for presenting symptoms.
- Ph testing is done where motility disorder is thought to be end-stage GERD.

Classification of EMD 00:18:36

- Esophageal motility disorder is of two types: primary and secondary.
- Primary disorders include achalasia cardia, diffuse esophageal spasm, nutcracker esophagus, hypertensive LES, and ineffective esophageal motility.
- Secondary disorders: Result from progressive damage induced by underlying collagen vascular disease or neuromuscular disorders.
  - Scleroderma
  - Dermatomyositis
  - Polymyositis
  - Lupus erythematosus
  - Chagas disease
  - Myasthenia gravis
- Motility disorders of the esophageal body include diffuse esophageal spasm and nutcracker esophagus.
- Motility disorders of LES include hypertensive lower esophageal sphincter.
- In the third category, motility disorder affects both the esophageal body and LES; it includes achalasia cardia.

Achalasia Cardia 00:21:38

- It is the most common motility disorder of the esophagus.
- It is the most common hypomotility disorder of the esophagus.
- Achalasia means failure of LES relaxation.
- Usually, achalasia cardia affects young women.

Pathology

- **Pathogenesis:** often idiopathic, can be associated with infectious neurogenic degeneration.
- There are two kinds of pathologies: Primary and secondary pathology.
- The primary pathology was the destruction of nerves to LES. There is a selective loss of inhibitory neurons.
- Secondary pathology, there is a degeneration of the neuromuscular function of the body of the esophagus. There would be hypertension of LES and failure of LES to relax. Ultimately, there would be a loss of progressive peristalsis.

Primary Achalasia

- It is idiopathic (unknown etiology is there).

Secondary achalasia

- It is also called pseudo achalasia.
- It is an achalasia-like disorder.
- It is produced by adenocarcinoma of cardia.
- It is associated with malignant tumors metastasizing to the mediastinum or GE junction causing secondary achalasia; carcinoma bronchus, carcinoma breast, and carcinoma pancreas.
- Secondary achalasia is caused by Chagas disease.

Chagas Disease

- It is caused by Trypanosoma cruzi.
- It leads to the damage of the esophageal myenteric plexus.
- There is a loss of esophageal peristalsis.
- There is partial or absent LES relaxation.
- There is a megaesophagus.

Clinical Features

- **Classic triad:** Dysphagia (dysphagia begins with liquids and progresses to solids), regurgitation, and weight loss.
- There is heartburn, postprandial choking, and nocturnal coughing.
- There will be regurgitation of undigested and foul-smelling food.
- Because of aspiration, the patient develops pneumonia and lung abscesses. Bronchiectasis is seen in long-standing achalasia.
- Achalasia cardia is a premalignant condition. During the 20 years, it is up to 8%. It is the most common type because chronic mucosal irritation is squamous cell carcinoma.
- Adenocarcinoma can be seen in the middle third of the esophagus.
- There is an ongoing cancer incidence risk even in patients treated with achalasia cardia. That is why long-term surveillance is required for these patients.
- **Diagnosis:** Diagnosis is made by esophagogram and motility study. There is a dilated esophagus with distal narrowing, and the characteristic "bird beak" sign is observed.

- There is a lack of peristaltic waves in the body and there is the failure of relaxation of LES.
- **Other findings:** Spasm of LES, delayed emptying through LES, dilatation of esophageal body, lack of gastric air bubble on upright portion of esophagogram. Massive esophageal dilatation, tortuosity, sigmoid esophagus, and megaesophagus are seen in the advanced stages of the disease.
- Manometry is considered the gold standard test for the diagnosis of achalasia.
- Achalasia is defined by median IRP is more than 15 mm Hg without normal peristalsis.
- **Additional manometric finding of achalasia:**
  - Esophageal body pressurization.
  - Simultaneous mirrored contraction without evidence of progressive peristalsis.
  - Low amplitude wave forms indicate lack of muscle tone.

- **Types I achalasia (classic):** Median IRP >15mmHg, there are 100% failed peristalsis with minimal esophageal pressurization.
- **Type II Achalasia:** Median IRP >15mmHg, there are 100% failed peristalsis, pan esophageal pressurization with at least 20% of swallows.
- **Type III achalasia** also known as also known as spastic or vigorous achalasia.
  - Here medial IRP is more than 15 mm Hg without normal peristalsis. There is spastic contraction with at least 20% of swallows.
  - DCI is more than 450 mm Hg.s.cm.
- Endoscopy must be performed in all suspected achalasia patients.
- There is a role in evaluating the mucosa for the esophagus.
- To rule out secondary causes of distal esophageal narrowing (pseudo-achalasia).
- GE junction tumors
- Neuropathy
- Strictures.

Treatment 00:45:28

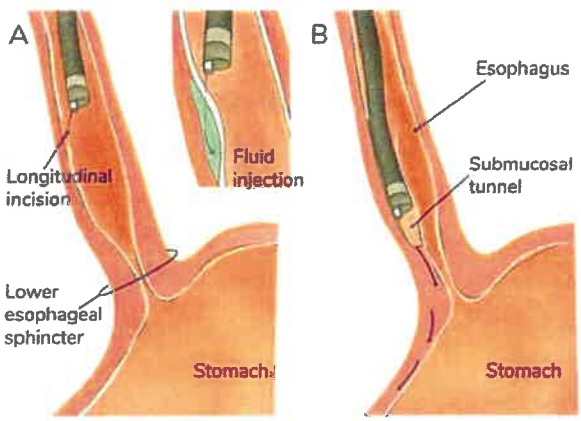
Non-surgical treatment options

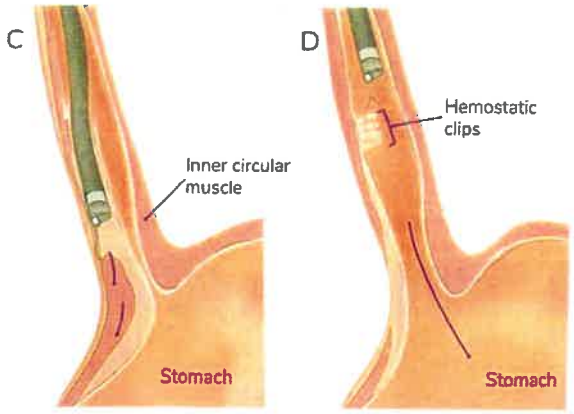
- Go for medications and endoscopic interventions.
- Endoscopic interventions and medications are going to provide short-term interventions.

Early stage of disease

- Sublingual nitroglycerin, nitrates, and calcium channel blockers require hours of relief from chest pressure.
- We can go for pneumatic dilatation. It can provide excellent relief from symptoms. Multiple interventions are required. There is an increased risk of esophageal perforation.
- Botox injection is directly given into LES. It blocks acetylcholine release.
  - It prevents smooth muscle contraction.
  - It relaxes LES.
  - Symptoms recur in more than 50% of patients within 6 months.

Remission of Symptoms





- It is seen in Balloon dilatation in 89% of patients.
- It is seen in 38% of patients at one year.
- The operation of choice for achalasia cardia is modified laparoscopic Heller's cardiomyotomy.
- If the patient is having reflux symptoms you can go for DOR or toupet.
- POEM- per oral endoscopic myotomy, may obviate the need of esophagectomy in malnourished and in high risk population.
- Any symptomatic patient with dilated, tortuous esophagus, sigmoid esophagus, failure of more than 1 myotomy, and reflux stricture not amenable to dilation may undergo esophagectomy.
- The advantage of esophagectomy is that it eliminates the risk of carcinoma in the resected area. It offers good long-term results with or without preservation of vagus nerve.
- If the patient has a megaesophagus, total esophagectomy with transthoracic dissection is done.

Diffuse Esophageal Spasm 00:57:02

- It is also known as distal esophageal spasm according to the Chicago classification.
- It is most notable in the distal 2/3rd of the esophagus.
- It is more common in females.
- It is a disorder of unknown causes.

Pathology

- The motor area of the esophageal body mainly affects the lower 2/3rd of esophagus.
- Muscular hypertrophy and degeneration of branches of the vagus nerve.
- Esophageal contractions are repetitive, simultaneous, and high amplitude.

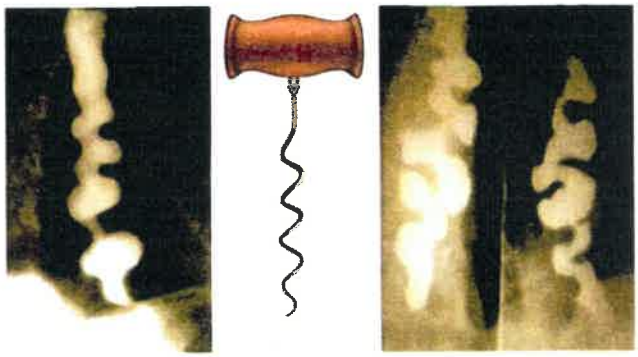
Clinical Features

- Left-sided chest pain and dysphagia, that's why it mimics angina.
- Symptoms are related to eating or exertion.
- There is squeezing pressure in the chest, which may radiate to the jaw, arms, and upper back.
- There is a regurgitation of esophageal content and saliva.
- Acidic reflux or cold liquids aggravate the symptoms.

- Irritable bowel syndrome and pyloric spasm may accompany DES.
- Gallstones, peptic ulcer disease, and pancreatitis trigger DES.

Diagnosis

CORKSCREW or ROSARY BEAD ESOPHAGUS



- On barium swallow, there is a corkscrew esophagus or rosary bead esophagus. These patients have a segmental spasm or there is pseudo diverticulosis. These findings are because of tertiary contraction. It is indicative of advanced disease.
- The gold standard investigation for motility disorder is manometry.
- In DES there is normal median IRP. At least 20% of premature contractions will be there.
- DCI is the composite measure of distal esophageal contraction. DCI should be more than 450 mm Hg.s.cm.

Treatment

- In DES symptom relief is often partially.
- The mainstay of treatment is non-surgical it could be pharmacologic or endoscopic interventions are preferred.
- If dysphagia is a component of the patient's symptoms, eliminate trigger food or drinks.
- If reflux is a component of the patient's symptoms, these patients should be given acid-suppressing medication.
- Nitrates, calcium channel blockers, sedatives, and anticholinergics are used.
- Bougie dilatation up to 50 or 60 Fr. Provides relief for severe dysphagia. And effective in 70 to 80% of cases.
- In botulinum toxin, there are non-sustainable results.

Indications for surgery

- Incapacitating chest pain or dysphagia failed to respond to medical therapy. In these patients, we go for a long esophagomyotomy.
- In long esophagomyotomy, there is a proximal extent. Proximal extent includes the entire esophagus with abnormal motility.
- The distal extent is extended up to the lower esophagus sphincter.
- DOR fundoplication is done to prevent reflux symptoms.

Nutcracker Esophagus 01:13:55

- It is the most hypermotility motility of the esophagus.
- It is the most painful motility disorder.
- It is a hypercontractile esophagus.
- It is a Jackhammer esophagus.
- It is characterized by excessive contractility,
- In the esophagus, hypertensive peristalsis or high amplitude contractions.
- It is equally common in males and females.

Pathology

- It is associated with hypertrophic musculature. It leads to high amplitude contraction of the esophagus.

Clinical Features

- Chest pain and dysphagia like diffuse esophagus spasm.
- Patients are having odynophagia.
- Reflux and regurgitation are uncommon.

Diagnosis

- An esophagogram may or may not reveal any abnormality.
- **Diagnosis according to Chicago classification:** Chest pain and at least two swallows showing DCI more than 8000 mm.Hg.s.cm with single or multipeaked contractions on HRM.

Treatment

- The primary initial treatment is medical treatment.
- In cases of acute spasms, we give calcium channel blockers, nitrates, and antispasmodics to provide temporary relief.
- In patients with severe discomfort, bougie dilatation.
- Patients are told to avoid caffeine and cold and hot foods.
- Early results from POEM have excellent clinical response.

Hypertensive LES 01:21:29

- According to the Chicago classification it is also called EGJ outflow obstruction.
- It is defined on HRM as median IRP, which should be more than 15 mm Hg.
- The pathogenesis of hypertensive LES is not well understood.

Clinical Features

- Chest pain.
- Dysphagia.
- Heartburn
- Regurgitation.

Diagnosis

- **Manometry:** There is a hypertensive and poorly relaxing sphincter.
- **Esophagogram:** There is a narrowing at the GE junction at delayed emptying. Esophageal contraction is abnormal.

Treatment

- Endoscopy and surgical intervention.
- Botox injection alleviates symptoms temporarily.
- Hydrostatic balloon dilatation provides long-term symptomatic relief.

Indications of Surgery

- Failure to respond to interventional treatments.
- Significant symptoms.
- **Operation of choice:**
  - It is Laparoscopic Heller's esophagomyotomy.
  - If the patient has normal esophageal motility, we go for partial fundoplication. We perform DOR/ TOUPET fundoplication.

Ineffective Esophageal Motility 01:29:14

- There is a contraction abnormality of the distal esophagus.
- It is associated with gastroesophageal reflux disease.
- It is secondary to inflammatory injury of the esophageal body because of increased exposure to gastric contents.
- These patients have poor acid clearance in the lower esophagus.

Clinical Features

- Patients are having mixed symptoms of contraction abnormality of lower esophagus and GERD.
- Patients usually present with dysphagia and reflux symptoms.
- Patients are having heartburn, regurgitation, and chest pain.

Diagnosis

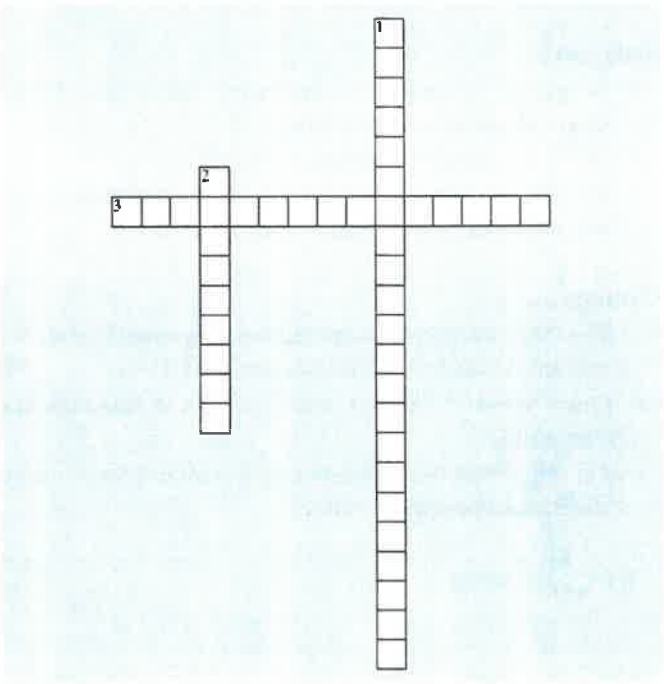
- Diagnosis is made by manometry. More than 50% of swallows are deemed ineffective.
- DCI is less than 450 mm Hg.s.cm.
- On the barium esophagogram, there are non-specific abnormalities of esophageal contraction.

Treatment

- The best treatment of ineffective esophageal motility is prevention. Go for effective treatment of GERD.
- Once there is altered motility, the disease appears irreversible.
- On high resolution manometry scleroderma mimics ineffective esophageal motility.

CROSS WORD PUZZLES

Crossword Puzzle 1



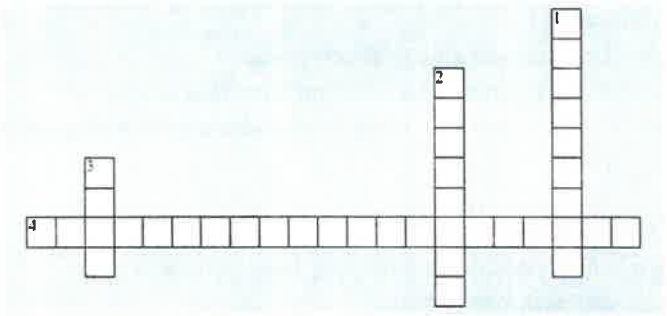
Across

3. Most common motility disorders and most common hypomotility disorders are_____.

Down

1. The most common hypermotility disorder and most painful motility disorder is the_____.
2. In esophageal motility disorder the diagnosis is made by_____.

Crossword Puzzle 2



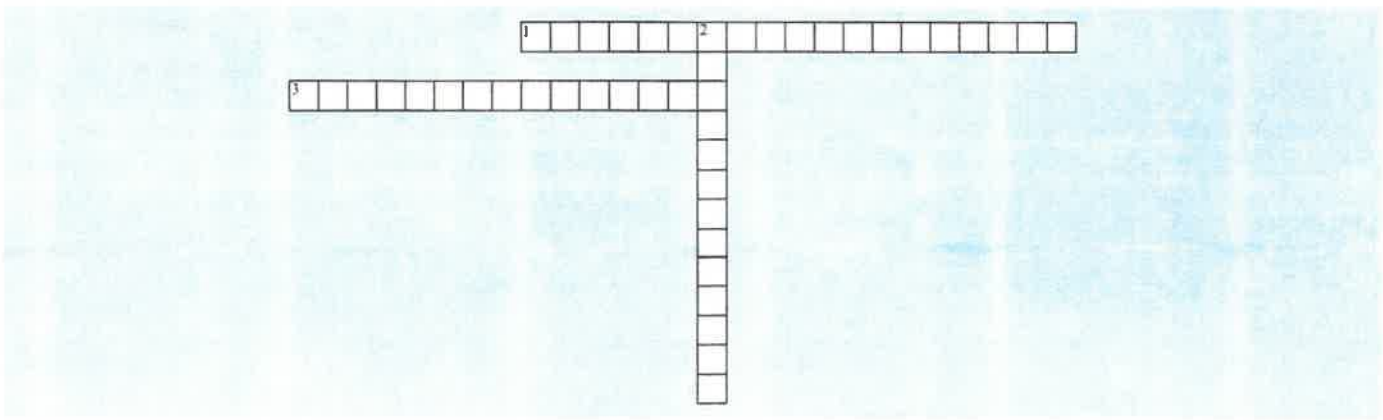
Across

4. If the patient has normal esophageal motility, we go for_____.

Down

1. Manometry is considered the gold standard test for the diagnosis of_____.
2. _____ disorders of the esophageal body include diffuse esophageal spasm and nutcracker esophagus.
3. Ph testing is done where motility disorder is thought to be end-stage_____.

Crossword Puzzle 3



Across

1. _____is Jackhammer's esophagus.
3. __is the most common motility disorder of the esophagus.

Down

2. _____is caused by Trypanosoma cruzi

2 GASTROESOPHAGEAL REFLUX DISEASE

Introduction 00:00:00

- GERD is the most common benign disorder of the esophagus.
- There is a retrograde flow of gastric content through LES caused by incompetent LES.
- It is associated with type I hiatal hernia- sliding hernia.

Pathophysiology 00:00:52

- Due to the incompetence of LES, there is a retrograde flow of gastric content to the esophagus which leads to GERD, reflux esophagitis, ulceration and then healing via fibrosis. There is a formation of stricture.
- In the long term, it may lead to columnar metaplasia and intestinal metaplasia with goblet cells known as Barrett's esophagus which increases the risk of adenocarcinoma.

Clinical Features 00:02:47

- The most common symptom in GERD patients is retrosternal heartburn. These patients have a long history of heartburn with a shorter history of regurgitation.
- The classic triad is retrosternal heartburn, epigastric pain, and regurgitation.

Complications 00:04:02

- Complications associated with GERD are esophageal ulcerations and peptic stricture.
- There may be columnar or intestinal metaplasia with goblet cells that lead to Barrett's esophagus. Barrett's esophagus presents with red velvety mucosa, tongue-like projections on endoscopy and presence of goblet cells on biopsy.
- Other complications can be carcinoma esophagus and pulmonary diseases due to regurgitation such as asthma, chronic cough, and fibrosis.

Diagnosis 00:05:14

24 Hours PH Monitoring

- 24-hour PH monitoring is the gold standard for diagnosing and quantifying acid reflux. A disposable probe is inserted in the distal esophagus allowing remote recorders to collect data for 24-48 hours. Data regarding how many times the probe is bathed with a pH less than 4 was collected.
- The patient should not be on anti-secretory and antacids for at least 5 days- 2 weeks before the test.
- A Demister's score is calculated, and in normal patients, it is less than 14.72. If the score exceeds 14.72, it confirms pathological GERD.

Esophageal Motility Testing

- Esophageal motility testing is done to evaluate peristalsis contractions, to look for motility disorder and incompetent LES, to distinguish GERD from achalasia or scleroderma and allow tailoring of treatment for patients with GERD and motility disorder.
- In patients with mildly impaired motility in the setting of positive PH testing indicates GERD, and floppy or partial fundoplication should be performed.
- However, in Long-standing GERD patients with esophageal dysmotility should be counseled about postoperative dysphagia.
- Patients with severe dysmotility should be considered for further workup or non-surgical therapy.

Video-Esophagogram

- Video-esophagogram shows both the structure and function of the esophagus.
- It diagnoses abnormalities that would modify symptom treatment like stricture, masses, hiatal hernia, foreshortened esophagus, or diverticulum.
- It confirms the reflux and is suggestive of motility disorders or achalasia.

Endoscopy

- Endoscopy is used to evaluate the shape and course of the esophagus, to evaluate signs of reflux such as esophagitis or metaplasia, to rule out masses and strictures as a cause of symptoms and to perform a biopsy of abnormal findings such as metaplasia, dysplasia or carcinoma.
- Confirmation of pathologic acid reflux should be done by at least two objective tests prior to anti-reflux surgery.

Management 00:14:13

Lifestyle Modification

- Lifestyle modifications rarely decrease GERD symptoms. However, it can decrease the duration and severity of the symptoms and result in greater efficacy of medications.
- Encouraging weight loss in overweight patients and smoking cessation.
- Certain substances decrease LES pressure and increase the reflux of acid such as chocolate or coffee, alcohol, peppermint, smoking, and fatty food. Hence, patients should avoid these substances.
- Other lifestyle modifications are the elimination of inciting foods, smaller and frequent meals are recommended, and patients should not lie immediately, alcohol cessation and elimination of constipation.

Medical Management 00:16:02

- Treatment usually starts with PPI therapy. The therapy is maximal with twice-daily PPI therapy.
- There is a better response to surgery if the patient responds to PPI well.

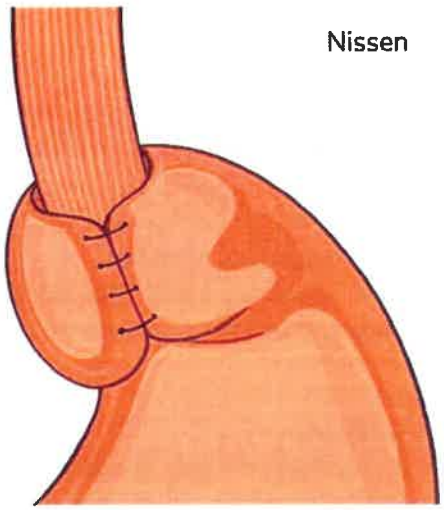
Indications of Surgical Therapy

- Surgery is indicated in patients with a severe esophageal injury such as ulcers, strictures, or Barrett's esophagus.
- Incomplete resolution of symptoms or relapse while on medical therapy
- If symptoms persist for a long duration or at a young age.

Basic Tenets of Antireflux Surgery

- Basic tenets of anti-reflux surgery are to preserve natural tissues and linings.
- Identify and preserve both vagus nerves,
- Identify the true esophagus-gastric junction for placement of wrap,
- Have sufficient length of the intra-abdominal esophagus.
- Reestablish the angle of HIS.
- Collis gastroplasty is done to increase the artificial length of the esophagus.

Laparoscopic Nissen's Fundoplication 00:18:40

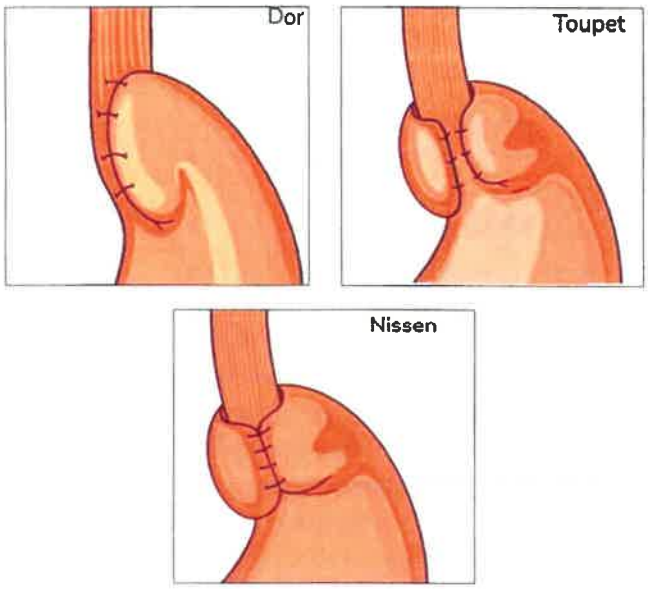


- The gold standard anti-reflux surgery for GERD is laparoscopic Nissen's fundoplication. There is a recreation of the sphincter around the gastroesophageal junction by 360° wrap of fundus around the distal esophagus.

Procedure

- The gastrohepatic ligament is incised until the phrenoesophageal ligament is visualized.
- Then the esophagus is mobilized circumferentially with preservation of vagus nerves and peritoneal lining along the crura.
- The short gastric vessels are taken and the gastrohepatic ligament is mobilized to meet the dissection along the left crest.
- The fat pad is mobilized from the anterior stomach or esophagus to visualize the true gastroesophageal junction and to exclude both vagus nerves from the wrap.
- At least 2-3 cm of intra-abdominal esophagus should be present to minimize the likelihood of postoperative hiatal hernia.
- The diaphragmatic hiatus is assessed and the crura is closed with non-absorbable sutures both anterior and posterior to the esophagus.
- A fundic tip along the line of short gastric vessels can be passed posterior to the esophagus excluding the vagus nerve in the fat pad to create the wrap.
- A shoe-shine maneuver is performed. It ensures mobility and a lack of tension.
- Simultaneously, a 50-54 French bougie is inserted in the esophagus while the edges of the wrap are sutured together with the incorporation of a portion of the interior esophagus.
- After removal of the bougie, crural closure and wrap are reassessed to ensure appropriate tension.
- Antiemetics should be administered liberally post-operation to avoid retching and vomiting that might disrupt the repair.
- Mesh is not necessary if naturally peritoneal lining is preserved along the crest.
- If there is a tension on the closure, the amount of CO2 insufflation can be reduced allowing tension-free closure.
- Complete 360° wraps are preferred especially in patients with compromised respiration or lung transplant recipients.
- There should be space for the passage of an instrument between the esophagus and stomach to reduce postoperative dysphagia and gas bloat.

Fundoplication 00:26:57



- In Nissen's fundoplication, there is a 360° complete wrap.
- Toupet's fundoplication is 270° posterior fundoplication. This is a partial fundoplication. There are additional tacking sutures to fix the stomach to the crura in the abdomen.
- In Dor's fundoplication, it is 180-200° anterior fundoplication. This is also a partial fundoplication. This fundoplication is most commonly performed in esophageal myotomy.

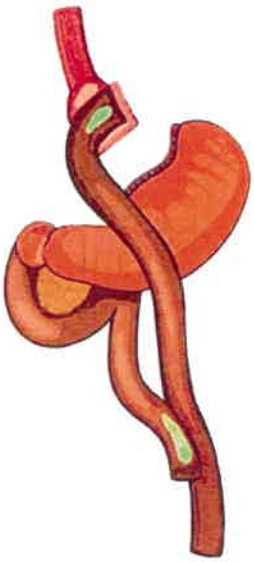
Post OP dysphagia 00:29:03

- Postoperative dysphagia is a major cause of reoperation in patients of Nissen's fundoplication.
- Partial fundoplication is preferred in patients with a history of pre-operative dysphagia and poor peristalsis on manometry.
- The rate of recurrent GERD is not insignificant regardless of the choice of wrap.
- Critical importance is given to appropriate patient selection and medical therapy before anti-reflux surgery.

Linx 00:30:39

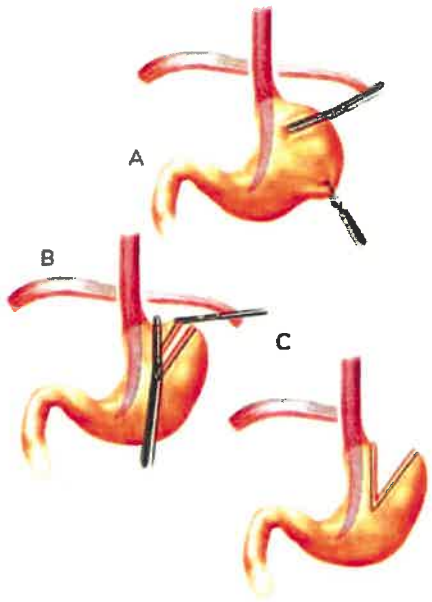
- Linx is used in patients with minimal or no hiatal hernia.
- A series of magnetic beads are placed around the gastric-esophagus junction that stretches with slight pressure in the esophagus and mimics the natural lower esophageal sphincter.
- There is a significant reduction in acid exposure at 1 year in 2/3rd of patients and significant improvement in quality of life and reduction of PPI in more than 90% of the patients.
- Patients taking linx had similar improvement in postoperative GERD health-related quality of life as fundoplication patients.
- Moreover, these patients experience significantly less regurgitation, gas bloat and PPI use at 1 year as compared to fundoplication.
- The use of Linx in patients with hiatal hernia of more than 3 cm is associated with excellent outcomes.

Roux-en-Y Reconstruction 00:33:25



- Roux-en-Y reconstruction is considered for patients with bile or gastric reflux, morbid obesity and diabetes and esophageal motility.
- Small gastric pouch near the esophagojejunostomy. It allows the passage of all gastric and biliary content into the jejunum preventing the reflux of bowel content into the esophagus.

Collis Gastroplasty 00:35:40



- Collis gastroplasty is an esophageal lengthening procedure in patients undergoing fundoplication but decreased length of the intra-abdominal esophagus.
- There is a stapling of the fundus of the stomach. This is a wedge fundectomy. A metallic dilator is placed in the esophagus while performing this procedure.
- Collis gastroplasty creates a few cm of additional non esophageal length around which the stomach can be wrapped.
- PPI should be continued in post-operative patients because there is acid-secreting mucosa above the wrap, helping to manage acid reflux and promote recovery.

Complicated GERD 00:38:53

- Biopsy should be performed in patients with esophagitis. Biopsy can reveal medically treated problems such as candidiasis or eosinophilic infiltrative processes.
- Biopsies should be performed in all the strictures to rule out malignancy. A benign malignancy can be managed with dilatation.
- Biopsy should be performed in four quadrants every cm in patients with Barrett's esophagus to rule out dysplasia and carcinoma.
- Patients having heartburn or dysphagia usually have partial or complete intrathoracic stomach.

- Patients with small hernia with gastroesophageal junction above diaphragmatic hiatus have symptoms of GERD. These are typically type I or sliding hernia in which there is herniation of gastroesophageal junction into the thorax.
- Patients with moderate or large hiatal hernia have intrathoracic stomach. These patients have symptoms of both hiatal hernia and acid reflux.
- These patients have dysphagia, food sticking, early satiety, regurgitation, chest pain, and vomiting because the mechanical component is the dominant pathologic process.
- Workup in such patients includes pulmonary function as an intrathoracic stomach may lead to compromised lung function.
- Cardiac evaluation should be performed as there may be overlapping symptoms with cardiac symptoms.
- During the reduction of hernia, the esophagus might be foreshortened. Treatment for such conditions is done with gastropexy vs fundoplication or Collis gastroplasty with fundoplication.
- There will be relief of symptoms with gastropexy if there are dominant mechanical symptoms.
- Most patients benefit from partial fundoplication since esophageal motility is unknown.