Objectives

- Examine the anatomy and pathophysiology of a hernia
- Identify patients who are candidates for surgical intervention
- Evaluate current and emerging surgical options (open, laparoscopic, robotic) for patients with a hernia

Hernia

- Abdominal wall composed of:
  - skin
  - subcutaneous tissue (fat)
  - muscle
  - fascia (hernia is a hole in the fascial layer)
  - peritoneum (hernia sac)
- A hernia is defined as sac formed by the lining of the abdominal cavity. The sac comes through a hole or weak area in the strong layer of the abdominal wall called the fascia.
Types of Hernia

- Umbilical
- Inguinal
- Ventral/Incisional
- Spigelian
- Femoral
- Hiatal/Paraesophageal
- Obturator
### Risk Factors
- Increased intra-abdominal pressure
- Obesity
- COPD
- Heavy lifting
- Tobacco/Smoking
- Genetic (Collagen)
- Previous abdominal surgery (Incisional hernia)

### Signs and Symptoms
- Pain (dull, worse on exertion)
- Bulge or mass

### Differential Dx
- Hernia
- Lymph Node ( Reactive, Metastatic, Lymphoma)
- Soft tissue tumor ( Lipoma, Sarcoma)
- Vascular (tumor, anuerysm)
- Cyst
- Desmoid, Endometrioma (female patient, hx of a gynecologic surgery, close to the scar)
- Hydroceale/Varicoceale
- Testicular Torsion
- Testicular Tumor
Diagnostic Imaging
- Ultrasound (Dynamic with Valsalva)
- CT scan
- MRI

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www.healthtap.com
Management

- Observation (Abdominal binder)
- Surgical Repair
  - Laparoscopic vs Open
  - Mesh

Principles of Hernia Surgery

- Safely reduce hernia content (bowel, omentum, etc.)
- Excise hernia sac
- Close fascial defect
- Minimize tension on the repair
- Reinforce with mesh when indicated
Laparoscopic vs Open Hernia Surgery

- Which repair is better?
- What are the differences between the two?

Laparoscopic vs Open Approach

**Open**
- Anterior approach
- Traditional incision

**Laparoscopic**
- Posterior approach
- Multiple small incisions

Open Comparing Surgical Technique

Open Repair is an anterior approach
Laparoscopic Repair is a posterior approach
**Inguinal Hernia**

**Laparoscopic vs. open**

- No significant difference in recurrence rate
- Data suggests less pain and numbness in laparoscopic repair
- Return to usual activities is faster in laparoscopic repair
- Operative times are longer with laparoscopic
- Higher risk of serious complication with laparoscopic approach, in particular bladder and vascular injury

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**Ventral/Incisional Hernia**

**Laparoscopic vs. Open**

- No difference in recurrence rate
- Reduced risk of wound infection in laparoscopic
- Shortened hospital stay
- Lower 30-day morbidity in laparoscopically repaired strangulated & recurrent hernias (4.7% vs 8.1%)
- No difference in pain intensity

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Para-esophageal & Hiatal Hernia
Protrusion (or herniation) of the upper part of the stomach into the posterior mediastinum via a disruption of the esophageal hiatus of the diaphragm.

Symptoms: Heartburn, Chest pain, Cough
Management:
- Medical management (PPI)
- Surgery (Open, Laparoscopic, Robotic)
References


