Hernias

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HERNIAS!

Halstead Student Lecture Series

Fall 2015

Most info from Greenfield’s Surgery

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What is a hernia?

- A defect, weakening, or ‘hole’ in the abdominal wall where it should not be
  - **Areas of weakness:**
    - umbilicus, hiatus, inguinal canal
    - Previous incision
    - Mesenteric defects

- **Types:**
  - Inguinal (direct, indirect, pantaloon)
  - Umbilical
  - Ventral:
    - Incisional hernia — any abdominal wall gap, with or without a bulge, that is perceptible on clinical examination or diagnostic imaging within 1 year after the index operation
    - Richter
  - Femoral
  - Hiatal
  - Other (lumbar, spigelian, obturator)

- **Incidence:**
  - Inguinal hernias ~ 75% of abdominal wall hernias
  - femoral hernia - 5%
  - Incisional, umbilical, and epigastric hernias -15%
  - miscellaneous hernias - 5%
History

- Duration/onset
- Symptoms
  - Local
  - Obstructive (nausea, vomiting, distension, etc)
- Prior incarceration
- Related comorbidities
  - Cough/urinary flow/constipation
  - Operative risk
Pertinent Exam

- **General:**
  - Distension
  - Evidence of bowel obstruction
  - Scars
    - Incisional hernias
    - Recurrence
    - Any contraindications for certain approaches

- **Hernia specifics:**
  - Location
  - Reducibility
  - Tenderness
  - Skin changes
  - Palpable edges
  - Genitalia
Diagnosis

- Primarily based on physical exam
- Imaging:
  - X-ray (looking for obstruction)
  - CT scan (define anatomy, additional defects, etc)
WHY is DURATION so important

- Reducible vs. incarcerated vs. strangulated
Inguinal Hernias

- Important to KNOW YOUR ANATOMY
- Direct vs indirect determined by???
  - Location to epigastric vessels
  - Which kind is medial?
What is Hesselbech’s Triangle
Inguinal Canal Contents

- Creamsteric fibers (internal oblique)
- Gonadal artery and vein
- Genital branch of genitofemoral nerve
- Vas deferens
- Cremasteric vessels
- Lymphatics
- Processus vaginalis
- ± Hernia
Repair Options

- Primary repair
  - McVay
  - Bassini
  - Shouldice

- Mesh repair – multiple options
  - Lichtenstein

- Laparoscopic

- Risks
  - Recurrence
  - Chronic pain (may be as high as 50% at 1yr)
  - Ischemic orchitis (1%)
Lichtstein Repair

- https://www.youtube.com/watch?v=Ko1iS3qYHFU
- https://www.youtube.com/watch?v=6NrS6H4TmD4
Laparoscopic TEP vs TAPP
Posterior Hernias

- Lumbar hernia
  - Grynfeltt
    - superior
  - Petit-
    - inferior
  - Repair if large or symptomatic
  - Use prosthesis or tissue flap
Ventral Hernias

- **Treatment:** usually surgical
  - Open repair
  - Laparoscopic repair
  - Mesh vs no mesh
  - Need for component separation

- **Surgical approach depends on**
  - Type of hernia – what are examples???
  - Location
  - Size
  - Number of defects
Ventral Hernias

- Overlay
  - Recurrence rate up to 25%
  - Closer to skin - higher infection rate

- Inlay (bridging)
  - Not considered ideal due to poor mesh fixation, inadequate lateral overlap, shrinkage of mesh
  - 17-32% recurrence rate

- Sublay - mesh btw abdominal muscles and either posterior fascia, transversalis fascia or peritoneum
  - Considered most effective
Ventral Hernias
Internal Hernias

- Retroduodenal
- Fossa of Landzert (L)
  (Left Paraduodenal Hernia)
- Fossa of Waldeyer (W)
  (Right Paraduodenal Hernia)
Internal Hernias
Diaphragmatic Hernias
Hiatal Hernias
CASE 1

A 55 year old man comes to you office after being referred by his PCP for inguinal mass. He is asymptomatic and physically active

- **Next step???

- PMH/PSH – none
- Meds – tylenol occasionally
- Allergies – none
- FH – denies DM, CAD, +colon CA
- SH - +EtOH on weekends (3-4/night), denies tob/ drugs
- ROS – what is important to know???

- Physical exam… maneuvers?
Differential Diagnosis

Hydrocele
Encysted hydrocele of the cord
Varicocele
Epididymo-orchitis
Torsion of the testis
Undescended testis
Ectopic testis
Testicular tumor
Pseudo-hernia
Femoral artery aneurysm
Saphena varix
Lipoma of spermatic cord
Inguinal lymphadenopathy
Psoas abscess
Cutaneous lesions (e.g., sebaceous cyst, skin tumor)
It appears to be an inguinal hernia on exam.

The patient asks you…

- Do I need surgery? And why?
- What are the risks of surgery?
CASE 1 CONTINUED

The patient has more questions...

• I heard that St. Luke’s does all of them with those tiny cuts and a camera... how do you do it?
• How long is the recovery?
• I see all those commercials for lawyers that have something to do with mesh...
- Patient comes in for surgery
- You do a Lichtenstein repair
- Discharged home the same day with appropriate instructions…
CASE 1

Post –op...

- Patient returns with pain 2 weeks after surgery
- Patient returns with erythema of the skin
  - Purulent drainage?
- Patient returns with edema 1 month after surgery
CASE 2

48 yo F presents with nausea but no emesis and severe abdominal pain...

- PMH: previous DM (resolved), HTN, OSA
- PSH: RYGB, chole
- Meds: metoprolol, nightly bipap
- All: none
- FH: none
- SH: denies
- ROS: +75 lb weight loss in 1.5 yrs

- PE: HR 120s otherwise stable
  - Abd soft, distended, TTP LUQ with localized guarding
CASE 2

- Differential....
- Next step...
Questions?

Contact Information:

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Who We Are

- 5 Campuses
- 1 Children’s Hospital
- 140+ Physician Practices
- 17 Community Clinics
- 13 Health Centers
- 11 ExpressCARE Locations
- 80 Testing and Imaging Locations
- 13,100 Employees
- 1,340 Physicians
- 582 Advanced Practice Clinicians
- 3,700 Registered Nurses
- 60,585 Admissions
- 208,700 ED visits
- 1,161 Acute Care Beds
# Quality Milestones

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<tr>
<td>America's Best Hospitals for geriatrics-U.S. News &amp; World Report</td>
<td>America's Best Hospitals for endocrinology, gastroenterology and</td>
<td>America's Best Hospitals for gastroenterology, orthopedics and</td>
<td>America's Best Hospitals in 7 specialties-U.S. News &amp; World Report</td>
<td>America's Best Hospitals in 7 specialties-U.S. News &amp; World Report</td>
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<td>No. 1 in PA and No. 2 in the Nation for Heart Attack Results -</td>
<td>geriatrics-U.S. News &amp; World Report</td>
<td>pulmonology-U.S. News &amp; World Report</td>
<td>Magnet Prize®-American Nursing Credentialing Center</td>
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<td>Centers for Medicare and Medicaid Services (CMS)</td>
<td>No. 1 and No. 2 Hospitals in the Region-U.S. News &amp; World Report</td>
<td>Leapfrog “A” Grade for Patient Safety-The Leapfrog Group</td>
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<td>Top 5 Academic Medical Centers in U.S.-University HealthSystem</td>
<td>Magnet Hospital redesignation for nursing excellence-American</td>
<td>Accredited Chest Pain Centers-Society of Cardiovascular Patient</td>
<td>America's Safest Hospitals - AARP</td>
<td>America's Safest Hospitals - The Leapfrog Group</td>
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<td>Consortium (UHC)</td>
<td>Nursing Credentialing Center</td>
<td>Care-AARP</td>
<td>Most Wired Hospitals &amp; Health Networks</td>
<td>Circle of Life for Palliative Care-American Hospital Association</td>
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<td>NCI Community Cancer Centers Program-National Cancer Institute,</td>
<td>Top Performer on Key Quality Measures-Joint Commission</td>
<td>100 Most Wired Hospitals-Hospitals &amp; Health Networks</td>
<td>Integrated Health System to Know-Becker's Hospital Review</td>
<td>Most Wired Hospitals &amp; Health Networks</td>
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<td>U.S. National Institutes of Health</td>
<td>Architecture and Design Award for environmentally friendly health</td>
<td>NCI Community Cancer Centers Program (NCCP) redesignationNational</td>
<td>100 Best Places to Work in IT-Computerworld Magazine</td>
<td>“Above Average” In Aortic Valve Replacement-Consumer Reports</td>
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<td>100 Most Wired and 25 Most Wireless Hospitals-Hospitals &amp; Health</td>
<td>care-GreenCare</td>
<td>Cancer Institute, U.S. National Institutes of Health</td>
<td>Computerworld Honors Laureate-Computerworld Magazine</td>
<td>Re-certified Comprehensive Stroke Center-Joint Commission</td>
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<td>Networks-SDI</td>
<td>Top 100 Integrated Health Networks-Venibepen</td>
<td>100 Best Places to Work in Healthcare-Becker’s Hospital Review</td>
<td>VHA Leadership Award for Supply Chain Management Excellence-VHA</td>
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<td>Leapfrog Top Hospital-The Leapfrog Group</td>
<td>100 Best Places to Work in Healthcare-Becker’s Hospital Review</td>
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<td>HealthGrades Emergency Medicine Excellence Awards (LVH and LVH-Muhlenberg)-HealthGrades</td>
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<td>Carolyn Boone Lewis Living the Vision-American Hospital</td>
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