Review Topics

- Colo-rectal cancer/GI bleeding
- Diverticulitis/Appendicitis/IBD
- Peptic Ulcer
- Bowel Obstruction
- Breast Disease
- Hernias
- Thyroid disease
- Biliary Disease/Pancreatitis/Jaundice
- Trauma
- Peri-anal Disease
Colon Cancer

- Risk Factors
- Genetics
- Presentation
- Investigations
- Treatment

**Risk Factors**
- Diet
- Genetics
- Age
- IBD’s

**Presentations**
- Anemia (R)
- Obstruction (L)
- RLQ Pain
- Change in Bowel Habits
- Rectal Bleeding
- Perforation
Adenoma-Carcinoma Sequence

- Sporadic - >94%
- FAP - <1%
- HNPCC -

Investigations

- FOBT
- Digital Rectal exam
- Barium Enema
- Colonoscopy
- CT Scan / MRI
- U/S
Screening

- FOBT annually
- Screening Colonscopy:
  Age > 50 q1 yrs.
  Exception: Family History
  - History of polyps
  - IBD

Surgical resections
Treatment
(depends on presentation)

- Nothing
- Chemo-radiation therapy (adjuvant & neoadjuvant)
- Surgery, Surgery, Surgery
  - Resection (anastomosis)
  - Resection (stoma i.e.: Hartman’s Procedure)
    - Delayed reconstruction
  - Palliative procedures
    - Intestinal by-pass

Diverticulitis

- Pathophysiology

Increased luminal pressure
Risk Factors

- High Fat
- Geography
- Genetics
- Weight
- Low Fiber (Not)

Presentation

- Diverticulitis
  - Phlegmon (micro-perf)
- Perforation
  - Abscess (micro-perf)
  - Free perforation (macro-perf)
- Bleeding
- Obstruction
  - Chronic disease (Sigmoid colon)
- Fistulas to adjacent organs
Epidemiology

- >70% after age 80
- ≥3% recurrence after 1st attack
- 1st attack usually the worst
- Complications usually at first attack

Diverticulitis

- CT abd/pelvis
- Antibiotics
- Analgesics
- Non-operative treatment
- Barium enema/Colonscopy 7-9 weeks post D/C
- Surgery for chronic pain, and complications
Treatment

• ABC’s
• Fluids
• Antibiotics
• Resection (+/- stoma)
  – Hartman’s (urgent)
  – Primary anastomosis (elective)
• Management of complications

• Anatomical variation

Accounts for varied presentations and degree of systemic illness

Appendicitis
**Disease of the young**

- 9% of population
- Most common between 2-3 years of age
- Most common cause of acute abdomen
- Caused by luminal obstruction
  - Fecolith
  - Peyer’s patch (distal ileum in the young)

**Presentation**

- Vague abdominal pain
  - Peri-umbilical to localization RLQ
- N/V & diminished appetite
- Fever / leukocytosis / tachycardia
- **Progressive** symptoms
- Phlegmon / abscess / free perforation
Investigations

- **CLINICAL DIAGNOSIS**
- U/S in females of child bearing age
- BHCG important
- CT scan (rarely indicated)
- Dx Laparoscopy
- Observation
  - No antibiotics

Treatment

- Surgery
- Perc drain
  - abscess
- Antibiotics alone (rarely)
  - Indicated in delayed diagnosis
- Interval appendectomy
  - After percutaneous drain
  - After antibiotics
Acute Appendicitis

Rectal Bleeding

- Neoplasm...Benign Vs. Malignant
- Diverticular disease
- Angiodysplasia
- IBD
- Infectious
- Traumatic
- Ano-rectal disorders
Upper GI Bleed

- Esophageal Varices
- Mallory Wiese tear
- Peptic Ulcer/Benign or malignant/gastric or Duodenal
- Gastritis
Upper GI bleed

- Resuscitation
- Upper Endoscopy/Diagnostic & therapeutic
- Surgery

PUD

- Gastric or Duodenal Types I,II,III,IV
- Hypersecretion of acid (II,III) and/or failure of protective mucosal defenses(I,IV)
- H. Pylori
- Symptoms include pain, vomiting, bleeding
- Cancer associated with gastric ulcers in older patients
Indications for surgery

- Intractability (rarer than emergency indications)
- Obstruction (pyloric obstruction)
- Bleeding (post. duodenum)
- Perforation (ant. duodenum)
- NOTE: gastric perforations need to R/O cancer

Medical Therapy

- H₂ blockers
- PPI
- H-Pylori therapy
- Endoscopy (Dx and Bx and R/O pre-malignant lesions)
- Reduce lifestyle risks (smoking / caffeine etc...)
Perforated Ulcer

- Most common location - anterior proximal duodenum
- Gastric or duodenum
  - May be contained by surrounding anatomy
- Acute onset abd pain
  - Sepsis often delayed up to 24 hours
  - Chemical peritonitis - then bacterial

Investigations

- Upright AXR (best test)
  - Decubitus for at least 1 hour
  - May inject air through NG tube
- Physical exam and history
  - Diffuse peritonitis with discrete sudden onset
  - Rigid abdomen
  - May present localized RLQ pain (follows right para-colic gutter)
- Lab tests (non-specific)
- CT abd - most sensitive for free air
  - Rules out other etiology
Treatment

- Fluids
- Antibiotics
- Correction metabolic derangement’s
- Correction of coagulation defects
- Surgery, Surgery, Surgery
- Non-operative treatment in very specific cases
Surgical Therapy

- Graham’s patch
  - Omental patch
- Serosal patch
  - jejunum
- Billroth I and Billroth II
- Bx for cancer & H.pylori
  - Esp.. gastric for Ca
Bleeding Ulcer

- point vessel oversew

Gastroepiploic artery

Billroth I

Anterior vagus n. clipped and transected

Triangular lig.

Nasogastric tube

Completed gastroduodenal anastomosis
Mesenteric Ischemia

- The Great Pretender
## Risk Factors

- **Thrombosis**  
  - Vascular disease - CAD, PVD, DM, smoking
- **Embolism**  
  - Atrial fib, aortic plaques
- **Autoimmune diseases**  
  - Vasculitis
- **Prolonged intestinal obstruction**  
  - Closed loop
- **Volvulus**
- **Low flow states**  
  - Dehydration, hypotension, cardiac failure
- **Inotrope therapy**

## Presentation

- Sub - acute or acute abdominal pain
- Pain vs physical findings
- Diffuse non-localized abd pain
- Volume contracted
- Shocky / toxic
- Soft abd
- Acidosis
- Altered LOC
Investigations

• AXR
  – pneumotasis, thumb printing
• Lactate / CBC / CR / BUN / ABG’s
  – Non-specific
• ECG
  – A-fib
• CT abd with IV contrast
• Angiogram
Treatment

- Reverse underlying cause
  - Volume restoration
  - Stop inotropes
  - Correct coagulation defects, acidosis
  - Interventional radiology-balloon, stents
- Surgery
  - Bowel resection, embolectomy, bypass graft
- Find source of embolus
- Palliative care

Exam key points

- Abdominal pain and physical finds do not correlate
- Source of embolus or reason for thrombosis
- May be acidotic (blood work)
Small bowel Obstruction - Etiology

- Adhesions - 90%
- Hernias - 10-15%
- Masses (benign and malignant) - 10-20%
- Volvulus - 3%
- Intussusception - 1-2%
- Strictures (ischemic / IBD / other) - 5%
- FB - 2%
- Gall stone - 2-3%

Symptoms

- Vomiting / Nausea
- Abd distention
- Decreased stool and flatus
- Dehydration
- Antecedent nausea and cramping with meals
- Abd pain (cramping)
  - Localized means advanced disease
Diagnosis

- History and Physical
- AbXR
- CT abd/pelvis
- Antegrade small bowel enema
- Enteroscopy
  - Small bowel scope seeking tumor
  - Not indicated in complete obstruction
Pathophysiology of s.b. obst.

• Increased intraluminal pressure leads to decreased capillary flow and causes ischemia
• Mucosa secretes but does not absorb
• Colon beyond obstruction hence no absorption
• Bacterial proliferation secondary to stasis (gut translocation)
• Vomiting leads to dehydration and alkalosis

Management

• Drip and Suck (mainstay)
  – Fluids and NG decompression
  – The sun should never set or rise on a BO
  – Serial Monitoring clinically, Radiologically
• Hernia reduction
• Surgery
  – Hernia / adhesions / masses / FB / gall stone / stricture / volvulus

Indications for Surgery: toxicity / peritonitis / failure to progress
(Clinically/radiologically)
Large Bowel Volvulus

- Sigmoid (80 - 85%)
- Cecal (10 - 15%)
  - Bascule (10% of cecal volvulus)
- Transverse colon (5%)

Lack of fixation allows redundant colon to twist. Narrow mesenteric base.

Small bowel obstruction

- 70% resolve with non-op treatment
  - 50% will recur
- 30% require surgery
  - 20% will return with SBO
Etiology

• Sigmoid
  – Constipation (long history) & redundant colon
• Cecal
  – Intra-abdominal right colon
  – Lack of peritonealization
• Cecal Bascule
  – adhesions
• Transverse Colon
  – redundancy

Diagnosis

• Exam and history
• AXR
  – Kidney bean, bent inner tube
• Non-specific labs
• Contrast enemas
• Oscopy (rigid sig or colon)
• CT
• Sigmoid
• Volvulus
• Cecal
• Vovulus
Treatments

- Cecal Volvulus (Bascule)
  - Surgical reduction and resection
  - Cecopexy, tube cecostomy (not ideal)
- Transverse Volvulus
  - Surgical reduction and resection
- Sigmoid Volvulus
  - Rigid Sigmoidoscopy and de-torsion (rectal tube) († • - • % recurrence)
  - Surgery (Hartman’s or resection and re-anastamosis)
Solitary Thyroid Nodule
• 35 years old female presents with a mass on the right side of the neck for 9 months. There is no pain and no other lumps

History for a thyroid Nodule

• Duration
• Pain
• Dysphagia/odynophagia
• Hoarseness
• Strider
• Signs of Hyper Or Hypothyroidism
• History of radiation exposure
• Family history
What is important in the physical examination?

• Size
• Mobile vs Fixed
• Well circumscribed vs. diffuse
• Other nodules
• Thyromegaly
• Lymphadenopathy in the neck
• If voice problem indirect Laryngoscopy

What is the DDx of a thyroid mass?
Investigation of thyroid nodule

• Thyroid function tests
• USS
• FNA
• Radioactive Iodine scan

Solitary Thyroid Nodule FNA

• FNA (Fine Needle Aspiration Cytology)
  – Easy, safe, cost effective
  – Negative predictive value 98%-99%
  – False Negative rate 2%
  – False Positive rate 2%

• FNA Cytodiagnosis
  – Benign
    • Multinodular Goiter, thyroiditis, cyst
  – Malignant
    • Papillary (7%-8%), follicular (1%-2%), medullary (2%-10%), anaplastic(1%), lymphoma (1%), metastasis (rare)
  – Indeterminate
    • Adenom, Hurthle cell,
Solitary Thyroid Nodule

- **FNAC Result**
  - **Benign**  Observe and repeat FNAC in 1 year
  - **Malignant**  Surgery
  - **Indeterminate**  Serum TSH normal  Surgery
                      Serum TSH low  Radioactive scan
  - **Inadequate**  Repeat FNA

Surgical options

- Hemithyroidectomy + isthmectomy
- Total thyroidectomy +/- modified neck dissection
- Prognosis for a well differentiated thyroid cancer is 90% for 10 years
- Other types of thyroid cancer = Total thyroidectomy
Breast Disease

- The Breast Lump
- History and Physical
- Investigations:
  - USS
  - Mammography
  - FNA/ stereotactic Bx.
  - MRI

66 year old woman complains of lump in right breast
What further history would you obtain to evaluate the breast lump?

- Time
- Change
- Tenderness
- Hx of lumps and breast disease
- Family hx breast or ovarian CA
What are the important elements of the physical exam for this patient?

• Size
• Contour
• Tenderness
• Other lumps
• Nipple abnormalities (retraction, erythema)
• Skin abnormalities (dimpling, erythema)
• Axillary or cervical nodes
Peau d’orange

Skin tethering
Enlarged right breast with nipple retraction

Breast Cancer
What is the DDx of a Breast Lump?

Breast Lumps

- Breast Cyst
- Fibroadenoma
- Juvenile/Giant Fibroadenoma
- Phyllodes tumor
- Breast abscess
- Intraductal papilloma
- Sclerosing Adenosis & Radial scar
- Fat Necrosis
- Carcinoma
What are your next steps in evaluation of the breast lump?

Ultrasonography
Diagnostic Mammography
What is the treatment of breast carcinoma?

Breast Cancer Treatment

Surgery:
- Partial mastectomy
- Mastectomy
- Sentinel Lymph node
- Complete axillary node dissection

Radiation
Chemotherapy
Hernias

- Inguinal
  - Indirect
  - direct
- Femoral
- Umbilical
- Abdominal wall
  - epigastric
  - Incisional
  - Spigelian
- Internal

Hernia Complications

- Pain
- Incarceration
- Strangulation, ischemia
- Bowel obstruction
  - Richter
• Incidence
• 25% of male, 2% female lifetime risk
• Congenital, exertion, age, increased abdominal pressure, collagen disease
• Male 90% females 10%
• Indirect 80% direct 20%
• Femoral more common in females
Inguinal hernia

indirect  
direct
Pancreatitis & its Complications

- **Etiology**
  - Acute: Biliary 40%
  - Ethanol 40%
  - Idiopathic 10%

  Drugs
  - High lipid
  - ERCP
  - Post-op
  - Trauma
  - Anatomical
  - Scorpion
  - Hyperparathyroid

Pathophysiology

- Biliary Pancreatitis
- Passage of Stone
- Edema of Sphincter of Odi
- Increase pressure in Pancreatic duct
- Ethanol
- Unknown
- Local activation of pancreatic enzymes
- Tissue destruction
- Edema & inflammation
  - extensive tissue destruction
- Release of cytokines
Acute pancreatitis

Presentation

• Acute onset abd. pain
• N & V
• History of gall stones or alcohol
• Symptoms vs signs

Investigation

• Lipase
• U/S
  - pancreas
  - gall bladder
• CT scan

Grey-Turner sign
### Cullen’s sign

#### Ranson’s Criteria (prediction)

<table>
<thead>
<tr>
<th>Gallstone</th>
<th>Non-Gallstone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Admission</strong></td>
<td><strong>Initial 48 Hours</strong></td>
</tr>
<tr>
<td>Age &gt; 70</td>
<td>Hct Fall &gt; 1</td>
</tr>
<tr>
<td>Wbc &gt; 18,000</td>
<td>BUN elevation &gt; 2</td>
</tr>
<tr>
<td>Glucose &gt; 12</td>
<td>Ca &lt; 2</td>
</tr>
<tr>
<td>LDH &gt; 40</td>
<td>Base deficit &gt; 5</td>
</tr>
<tr>
<td>AST &gt; 250</td>
<td>Fluid Seq. &gt; 4 L</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gallstone</th>
<th>Non-Gallstone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &gt; 55</td>
<td>Hct fall &gt; 1</td>
</tr>
<tr>
<td>Wbc &gt; 16,000</td>
<td>BUN elevation &gt; 4</td>
</tr>
<tr>
<td>Glucose &gt; 10</td>
<td>Ca &lt; 2</td>
</tr>
<tr>
<td>LDH &gt; 360</td>
<td>Base deficit &gt; 4</td>
</tr>
<tr>
<td>AST &gt; 250</td>
<td>Fluid seq. &gt; 4 L</td>
</tr>
</tbody>
</table>
Acute pancreatitis

Treatment

- No specific Rx
- Hydration
- N/G suction
- Pain control
- Supportive
  - Oxygen, ventilator
  - dialysis
  - inotropes etc.

Outcome

- Common disease
- \(80\%\) - \(90\%\) transient
- \(10\% - 20\%\) severe
  - \(10\% - 20\%\) with severe will die
- Complications
- (Ranson’s criteria)

Local Complications:

1. Acute Fluid collection
2. Pancreatic Necrosis
3. Pancreatic Pseudocyst
4. Rupture of cyst
5. Pancreatic Abscess
• Diagnosis:
  Contrast enhanced CT scan
  FNA for infected necrosis

Pancreatitis & its Complications

• ١. Fluid collection: Conservative
• ٢. Pancreatic Necrosis: Conservative if
  Sterile Otherwise surgery
• ٣. Pancreatic psuedocyst: Conservative vs.
  surgery ٣٥٢٥٣٥ ٣٥٢٥٣٥ ٣٥٢٥٣٥ ٣٥٢٥٣٥ rule.
• ٤. Pancreatic abscess: Surgery
Gall stones

- Incidence increases with age
- 2:1 F:M
- 10% in yrs (F)
- 40% become symptomatic
- 2 - 4% complicated disease

- Acute colic
  - acute abdominal pain
  - epigastric pain moving to RUQ
  - radiates to back, scapula, shoulder
  - N&V
  - last 1 - 12 hrs
Complications

- Cholecystitis
- Biliary colic
- Cystic duct obstruction
- Choleduocholithiasis
- Pancreatitis
- Rupture
- Gall stone “ileus”
- Biliary cirrhosis
- Cancer

Gall stones

- Cholecystitis
  - empyema
  - hydrops
- Obstructive jaundice
- Cholangitis
- Pancreatitis
- Cancer
- (surgical complications)
Signs and symptoms

- Pain
- Murphy’s sign
- Courvoisier gall bladder
Gall stones surgery

- Indications
  - symptoms
  - complications
  - (comorbidities)

- Laparoscopic cholecystectomy (95%)
- Open (∆%)
- E.R.C.P. for common duct stones
- Cholecystostomy

Principles of Trauma

- Golden hour
- Primary survey
- Secondary survey
- Transfer to trauma center
  - Shortest out of hospital time
- Pearls
Primary Survey

A - Airway (c-spine)
B - Breathing
C - Circulation
D - Deficit
E - Exposure of pt (undress completely)

Secondary Survey

• F - Afection (keep pt warm)
• G - Et vitals (complete)
• H - Ead to toe
  – With gloves, feel and move everything...everything!!!!
• I - Inspect back (log roll pt)
  – Rectal if not done yet
  – Spine precautions during roll
Head to Toe

• Run hands through hair
• Remove c-collar with assistance and palpate neck (ant & post)
• Feel all facial bones, manipulate jaw and maxilla
• Passive ROM through all joints (not obviously injured)
• Look in ears
• Vaginal exam in females (if indicated)
  – Never assume vaginal blood is menses until proven

Interventions

• I.V. ² large bore (one above and one below diaphragm)
• Foley catheter (after rectal done)
• NG tube (if no basal skull fracture)
• Analgesia / sedation
• Antibiotics
• Tetanus
Investigations

• CBC, diff, lytes, Cr, BUN, glucose, ETOH, INR/PTT, x-match x 7 units, drug screen, ABG’s
• ECG (least important)
• CXR (most important x-ray), Pelvis, c-spine (x-table lat)
• U/S (FAST)
• DPL
• CT scan (head/chest/abd/pelvis)
• MRI (not usually in first 4-6 hrs)

Clearing the C-spine

• NO distracting injuries
• Alert and oriented
• No drugs or narcotics on board
• Must see to T1
• X-table lat / odontoid / AP views (minimum)
• CT neck if incomplete
• MRI
• Flexion and extension views
C-spine

X-table lateral view

Figure 21-3. Lateral x-ray of a hangman’s fracture of C2 and a fracture dislocation of C5 on C6 with bilaterally locked facets.

C-spine

Flexion and extension view
Chest X-ray
• Tension Pneumothorax

Chest X-ray
• Hemothorax
Indications for surgery in Thoracic trauma

- Massive continued air leak
- Hemothorax ₁₅₀₀ cc + ₂₅₀ cc/hr
- Major Tracheal/ Bronchial/esophageal injury
- Cardiac tamponade or Great vessel Injury
Prioritization

- Airway
- Breathing
- Circulation
- Deficits (preserving brain)
- Restore vascular continuity
- Restore orthopedic continuity
- Restore intestinal continuity
- Prevent infection
- Minimize cosmetic damage
- Minimize psychological fallout

Trends in Trauma Care

- Non-operative management Spleen and Liver injuries
  - Aggressive conservatism
- Non-operative management Kidney injuries
- Embolic hemorrhagic control
  - Interventional radiology
Hemorrhoids

• External (thrombosed) or perianal hematoma
  – Acute Pain
  – Sometimes bleed (small amount)
  – Left lateral / right anterior / right posterior

Vast majority will resolve with medical therapy only. Then follow up with aggressive bowel routine.

Hemorrhoids can indicate more serious occult disease. If recurrent or other symptoms needs referral to surgeon.

Internal Hemorrhoids (painless)

• Bleeding
  – Anoscope / sigmoidoscopy
  – Medical therapy
  – Banding
  – Hemorrhoidectomy (emergent rare)
• Prolapsed
  – Reduction and planned elective therapy
• Strangulated
  – Reduction and possible emergent hemorrhoidectomy
Fissure in Ano

- Is a linear ulcer of the lower half of the anal canal, usually found in the posterior midline (lateral fissures imply other disease)
- Associated with anal tags or sentinel pile
- Higher than normal resting pressure in the anal sphincter (internal)
- Cause and effect is not clear
- Associated with constipation (stool retention)
Treatment

• Good bowel routine (fruit / fluids etc...)
• 90% will heal with medical therapy (2-4 weeks)
• Acute vs chronic
  – Chronic more likely to require surgical treatment
Medical Treatment

- Stool softeners
- Dietary changes
- Nitro paste
- Botulism toxin
- Nifedepine
- Anal dilatation (recurrence \(\leq 3\%\) @ 1 year)
  - Short term incontinence \(\leq\) %

Surgical Options

- Lateral internal sphincterotomy (mainstay)
  - Open (\(\leq 1\%\) recurrence)
  - Closed (\(\leq 1\%\) recurrence)
- Incontinence \(\Delta\%\) average (closed less than open)
- Most recurrence resolve with medical therapy
Peri-Rectal/Anal Abscess

- Arises from the anal crypts/glands
- Painful / progressive
- \( \geq 10 \% \) associated with residual fistula
- I & D definitive treatment
- Consider underlying systemic disease
  - Especially if recurrent

Etiology of abscess (non-cryptoglandular)

- Carcinoma
- Trauma
- Crohn’s
- Radiation
- Tuberculosis
- Actinomycosis
- Foreign body
- Leukemia
Perianal Abscess

- Types

I & D Principles

- Always near the anodermal junction
- Break up all pockets
- Leave opening
  - Cruciate
  - ellipse
- Pack with wick X 1 day
- Sitz with BM and 1-2 X day
- Follow up in 1 week
- Refer intersphincteric / ischiorectal / supralevaltor to surgeon
Fistula-in-ano

- Rarely heal spont.
- Present with recurrent abscess
- Surgical treatment is ideal
  - Seton
  - Fistulotomy
  - Fistulectomy

Goodsall's Rule
Establishes the internal opening
Colon cancer risk is increased in all except one of the following:-

1) Juvenile polyps  
2) Familial polyposis  
3) Ulcerative colitis  
4) Previous colon cancer

Not all Polyps are created equal

Case #1:

• 50 y.o. female with 24 hours of progressive abdominal pain. Associated with vomiting, fever, anorexia. No previous history. Some diarrhea now, 12 hours no stool. Decreased urine output. Pain localized to LLQ.
What is the most likely diagnosis?

A. Colon Cancer  
B. Diverticulitis  
C. Appendicitis  
D. Mesenteric Ischemia  
E. Perforated Ulcer

FLASH QUIZ

Which of the following do you consider to be a strong indication for laparotomy?

1) Localized pain

2) Involuntary guarding

3) Crampy abdominal pain

4) Severe complaint of pain

5) Voluntary guarding
Case #7

- 78 year old male with 42 hour hx of vomiting, no stool or gas for 81 hours, abd pain and cramping, abd distention ++. No fever. Decreased urine output. Anorexic. Nursing home patient. Previous history of similar symptoms 2 months ago (resolved spont..)

What is the most likely diagnosis and how would you treat it?

A Small bowel obstruction
  Secondary to: adhesions / hernia / other

B Large bowel obstruction
  Secondary to: Cancer / diverticulitis / volvulus / other
What is the most likely diagnosis and how would you treat it?

A Small bowel obstruction  
Secondary to: adhesions / hernia / other

B Large bowel obstruction  
Secondary to: Cancer / diverticulitis / volvulus / other

Case #٣ (Trauma)
• A ٣٥ year old woman is involved as a right front seat passenger in a head-on automobile collision. In the emergency room, she has a tender abdomen and has the appearance shown here.
A likely injury she may have sustained would be:

- Perforated colon
- Ruptured spleen
- Mesenteric vascular avulsion
- Fractured pelvis
- Pneumothorax

**FLASH QUIZ**

How would you determine what was causing the following patient’s symptoms 2 minutes after arriving in the ER... hypotension, elevated JVP, tachycardia and dyspnea?

A Chest -x-ray (upright)
B CT chest
C Chest x-ray (supine)
D Needle thoracostomy
E ECG
FLASH QUIZ

What is Beck’s Triad?

A Diminished heart sounds, elevated JVP, tachycardia
B Diminished heart sounds, hypotension, tachycardia
C Elevated JVP, hypotension, diminished breath sounds
D Hypotension, diminished heart sounds, elevated JVP

FLASH QUIZ

What does Beck’s Triad indicate?
A Tension hemothorax
B Flail chest
C Pericardial effusion
D Disrupted tracheo-bronchial tree
FLASH QUIZ

Where is the most common location of blunt aortic tears?
A Aortic Root
B Ascending aorta
C Descending aorta at diaphragm
D Ligamentum arteriosum

FLASH QUIZ

Which of the following is an indication to take a patient with a spleen injury to the OR when managing non-operatively?
A Age \( \leq \) years
B Hypotension after transfusion
C Sudden severe abd pain \( \geq \) days after admission
D Hemoglobin of \( \leq \) \( \geq \) days after admission (no transfusion given)
Case #4

A 35 y.o. male presents with a lump and pain in the right groin for 8 hours. It is hard and tender and above the inguinal ligament. What is the most likely diagnosis?

A Femoral hernia  
B Indirect inguinal hernia  
C Direct inguinal hernia  
D Lymphoma
A 65yr old man comes into Emerg. with sudden severe abdominal pain. He is diagnosed as having acute pancreatitis. He does not drink, is on no meds. What is the most likely cause of his pancreatitis?

1) Idiopathic  
2) Hyperlipidemia  
3) Hypercalcemia  
4) Gall stones  
5) Scorpion bite

A patient has an U/S for kidney disease and is found to have gall stones. There is no history of symptoms. Which of the following are true?

1) Gall stones consist mostly of bile pigment  
2) Gall stones, left untreated, most will pass  
3) There is about a 6% chance the patient will become symptomatic  
4) There is a high incidence of gall bladder cancer with gall stones  
5) Gall stones are more often found in males
FLASH QUIZ

What is Charcot’s Triad?

A Hypotension
B Jaundice
C Fever
D RUQ pain
E Altered LOC

Sore Bum

Case #8

• Case #8: 82 y.o. male with 8 hours progressive anal pain. +++ sitting and with BM’s. Very sore to touch. No drainage. No diarrhea. No previous symptoms or history. Girl friend states anal area is red and hot and swollen.

What is the most likely diagnosis?
Sore Bum

- Case #: 8 y.o. male with 8 hours progressive anal pain. +++ sitting and with BM’s. Very sore to touch. No drainage. No diarrhea. No previous symptoms or history. Girl friend states anal area is red and hot and swollen.
- Perianal abscess

Differential diagnosis

- Hemorrhoids (external or internal)
- Fistula
- Fissure
- Rectal abscess
  - Peri-anal
  - Intra-sphincteric
  - Ischio-rectal
  - Supra-levator