Pelvic Pain/Endometriosis

Year 3
Updated April 2017
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Objectives

(At the end of this session…)

- Causes of acute and chronic pelvic pain will be more clear to you
- Investigations to determine the cause of pelvic pain will be at your fingertips
- The presentation, theories of pathogenesis, common sites of implants and diagnosis of endometriosis will be known.
- You will be able to discuss surgical and non-surgical treatment modalities for endometriosis.

Plan for session

1. Review differentials for acute and chronic pelvic pain
2. Review approach to distinguish between different diagnoses
3. Use 3 cases to illustrate possible scenarios you may encounter
4. Please interject anytime. This is supposed to be an informal session not a lecture. Audience participation is welcome!

What do we mean when we say Acute vs Chronic Pelvic pain?

- What features distinguish these?
- Can someone be the scribe and can the group generate some criteria?

Acute vs Chronic Pain

- Acute pelvic pain is rapid in onset and may be associated with unstable vital signs, abnormal physical and lab findings. Improper diagnosis can result in significant morbidity and possibly mortality
- Chronic pelvic pain is a multifaceted disorder which is defined as pain occurring for greater than 6 months, localized to pelvis, severe enough to cause functional disability or necessitating medical treatment

What are the causes of Acute and then Chronic Pelvic pain?

- Generate 2 lists…
- Need categories of acute and then chronic pain, then specific diagnoses

Categories

- Systems (gyne, pregnancy related, GU, GI)
- Within Systems can think anatomically
  - GYNE – ovaries, uterus, cervix, fallopian tube
  - Pregnancy – ovaries uterus, cervix, fallopian tube
  - GI – small bowel, large bowel, appendix
  - GU – bladder, kidneys, ureters
- Abdominal wall – muscles, skin, fat, nerves

Causes of Pelvic pain

- Acute
  - Gyne (Ruptured Ovarian Cyst (benign or malig), PID, degenerating fibroid, Ovarian torsion, dysmenorrhea. Mittelschmerz))
  - Pregnancy related
    - Ectopic
    - Miscarriage
  - GI (bowel perforation,bowel obstruction, appendicitis, cholecystitis)
  - GU (Kidney stones, UTI, pyelonephritis)
  - MSK/Abdominal wall – muscle spasm, Herpes Zoster, nerve entrapment due to spinal problem, hip injury
- Chronic
  - Gyne (Endometriosis, pelvic adhesions, adenomyosis, uterine prolapse, fibroids)
  - GI (Crohn's, Ulcerative Colitis, Irritable Bowel Syndrome)
  - GU (kidney stones, interstitial cystitis)
  - Abdominal wall – Herpes Zoster, muscle spasm, nerve pain related to spinal problem, arthritis hip

Causes of Pelvic pain

- Acute
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    - Ectopic
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- Chronic
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  - GI (Crohn's, Ulcerative Colitis, Irritable Bowel Syndrome)
  - GU (kidney stones, interstital cystitis)

Bhcg can eliminate these off the bat?

Expanding on Gyne Causes

- Ovarian cysts
  - Pain (nature?)
  - Mild or severe pain
  - If hemorrhagic may be ass'd with dizziness/fainting, shoulder tip pain
  - If torsion occurs can have fever, colicky pain, nausea, vomiting, tachycardia, elevated wbc
- Fibroids
  - Can cause pain by pushing against other structures or by degenerating
- Dysmenorrhea (cyclical pain)
- Endometriosis (cyclical pain usually, possible dyspareunia, pain may start prior to bleeding, GI/GU symptoms cyclical
- PID
  - Ass'd with pain, discharge, fever, cmt, inc wbc poss
- Mittelschmerz
  - Midcycle pain, may be cyclical, lasting few hrs or days, ass'd with dyspareunia possibly, cmt common

Case 1

- 23 yr old female with 3 month history of intermittent RLQ pain
- Saw Family Doctor 1 month ago and they ordered an U/S
- U/S showed a 4 cm Right Ovarian Cyst suggestive of a dermoid cyst
- o/w healthy on no meds, no allergies, no medical problems and no previous surgery
- Presents to ER with severe RLQ pain with waves of even more severe RLQ pain

Case 1

- What questions do you have?
  - What was she doing when pain started?
  - Any recent intercourse?
  - GI symptoms? (nausea, vomiting, constipation or diarrhea)
  - Fever?
  - GU symptoms?
  - Dizzy or lightheaded?
  - Is pain better lying still or when she moves?

Case 1
(some answers)

- She did have sex prior to severe onset of pain
- Generally pain better when still, although with severe wave of pain position doesn't seem to matter
- Some nausea, feeling warm

Based on history what is differential?

- Ovarian torsion
- Ruptured ovarian cyst
- Renal colic

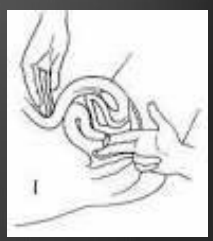
Physical Exam

- How does patient look overall? Uncomfortable? Unwell?
- Vitals HR, BP, postural changes?
- Abdominal exam (inspection-distension?, scars, tender?, peritoneal signs?, mass?)
- Speculum: swabs, discharge?
- Bimanual: CMT? Mass? Tenderness?

What is CMT and how is it done?

Cervical Motion Tenderness

Place 2nd and 3 rd finger on either side of the cervix
And move fingers from side to side looking at patients face to see if it causes discomfort.
A positive sign would be acute exacerbation of the pain with movement of the fingers. You do not have to ask the patient if it is painful. It would be obvious!



Case 1 Physical

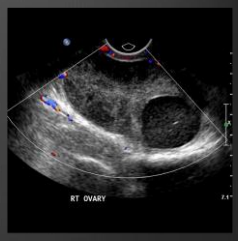
- Vitals HR 110 lying 112 sitting
- BP 120/80 lying, 117/75 sitting, Temp 37.5 C
- Chest, CVS normal aside from tachycardia
- Tender RLQ, ?peritoneal signs
- Cervix looks normal swabs for Chlamydia and Gonorrhea done
- Fullness, tenderness RLQ, Positive CMT
- What investigations would you like?

Case 1 - Labs

- WBC 15, neut 10, Hb 110, plts 250
- Normal lytes BUN, Cr
- Normal INR, PTT
- Urine clear
- Bhcg neg

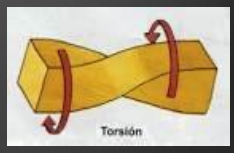
Case 1 - Ultrasound

- 8 cm R adnexal mass, some arterial flow present
- Does that rule out torsion?



Torsion – arterial and venous flow

- Torsion can be present with arterial flow
- Venous flow tends to stop first which leads to venous congestion and enlargement of torted area
- Ultimately arterial flow may stop as well



Case 1- How is the patient doing?

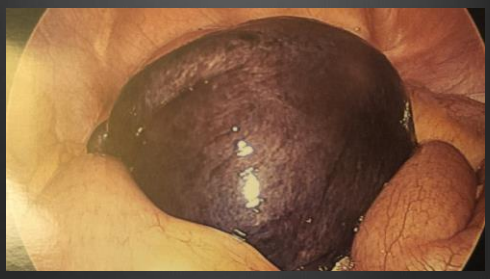
- Requiring Morphine sc for pain q3 h
- Still having pain
- Nauseous and Vomiting

- What do you want to do?

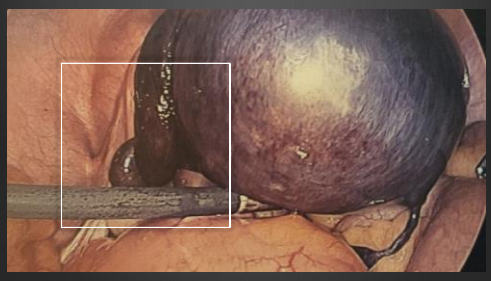
Options – What do you want to do and why?

- Admit and observe
- Admit and operate
  - Laparoscopy or laparotomy?
- Discharge home with analgesia and follow up ultrasound

Case 1 Laparoscopy



Case 1 Ovarian Torsion



Ovarian cystectomy vs Oophorectomy

- Generally we would try to preserve the ovary unless someone was postmenopausal or had a specific wish to have her ovary removed
- Detorsion with removal of any cyst present is preferred
- Draining a cyst can lead to reformation of cyst and possible retorsion
- In patients wishing to preserve fertility, consider detorting and reassessing adnexa in 4-6 wks with possible repeat laparoscopy when ovary less edematous and inflamed

Case 2

- 35 yr old female presents with LLQ pain and urinary frequency and hematuria with menses. Going on for 2 years
- Desires pregnancy
- What else do you want to know?
- Try to generate questions before next slide ☺

Historical questions

- When does pain occur? Cyclical? Midcycle?
- Periods (freq, duration)
- Heavy? (how many pads/tampons per day when heaviest)
- Painful? (when and any analgesia required?)
- Missed work or school?
- Painful voiding or BMs?
- Painful IC? Right or Left
- Birth control?

Case 2- some answers

- Pain starts 3 days before menses, severe for 4 days, missing work 2 days per month
- Menses heavy first 2 days, pads q4h, no clots
- Painful voiding with hematuria
- Painful intercourse L>R, unable to have sex over last 6 mos so attempts at pregnancy not going well
- No birth control for 2 yrs

Case 2

- Differential? Discuss for a moment
- Ovarian Cyst (benign, malignant, physiological
- Endometriosis involving pelvis and possibly bladder
- UTI
- PID
- Primary Dysmenorrhea
- Bladder tumor

Physical Exam

- How does patient look overall? Uncomfortable? Unwell?
- Vitals HR, BP, postural changes?
- Abdominal exam (inspection-distension?, scars, tender?, peritoneal signs?, mass?)
- Speculum: swabs, discharge?
- Bimanual: CMT?, Mass? Tenderness? Position of uterus?

Physical Exam Findings

- Tender LLQ and suprapubicly
- Fullness L adnexa
- Tender posterior to Cervix
- Retroverted uterus with anterior cervix
- Normal feeling cervix

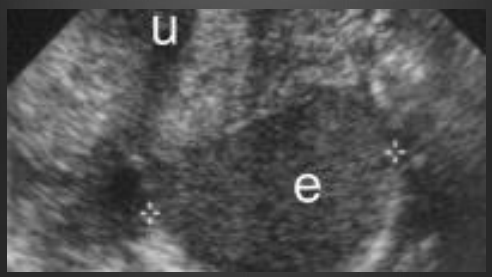
Case 2

- What do you think is going on in this patient with painful menses, left sided dyspareunia, painful micturition and cyclical gross hematuria?
- What investigations should be done next?

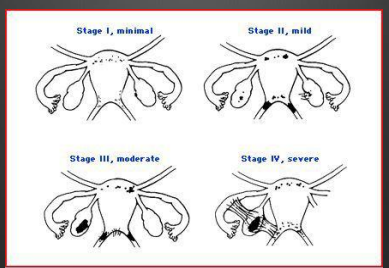
What Investigations should be done?

- Ultrasound, looking for what?

Ultrasound suggestive of endometrioma



Common sites of endometriosis



Examples of the classification of endometriosis Modified from the American Society for Reproductive Medicine.

Pathogenesis of Endometriosis

- Implantation theory: Retrograde menstruation and transplantation of viable endometrial cells in pelvis
- Coelemic Metaplasia: cells differentiate into endometrial tissue
- Hematologic or Lymphatic spread

Case 2 Treatment options (medical)

- Expectant +/- Analgesia (NSAIDS)
- OCP cyclical or continuous with monophasic pill
- Dieonogest (visanne) 2mg daily ($$) (h/a 9%, dep'n 5%, bleeding changes common, acne 5%)
- GnRH agonists +/- hormonal addback ($$)
- Progesterone (Micronor), Mirena
- DepoProvera
- Danazol

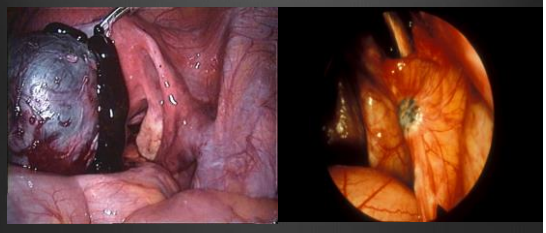
Case 2 Treatment options (surgical)

- Surgical
  - Laparoscopy with laser or cautery
  - Cystoscopy if bladder lesion
  - Hysterectomy +/- oophorectomies
  - Oophorectomies

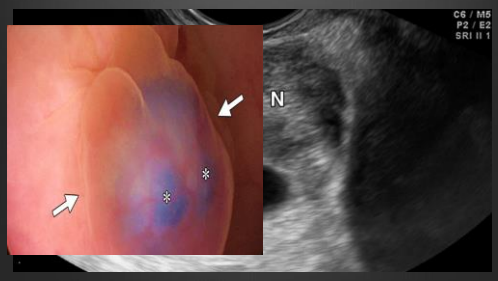
Case 2 Recommendation

- Patient asks you what do you think next step should be?
- Explain why you recommend …

Laparoscopic views of Endometriosis



Endometriotic lesion in the bladder



Case 2

- She had laparoscopic left ovarian cystectomy and laser of endometriosis. Urology resected endometriotic lesion in her bladder.
- Her dysmenorrhea improved and dyspareunia resolved. Pain with micturition also resolved.
- She was planning to try and get pregnant..

Case 3

- 24 yr old female G0 who presents with heavy menses and constant abdominal pain
- Hb 70
- Wants to have kids one day
- Jehovah's witness
- Drug plan expires in 6 months

Case 3

- What do you want to know?
- What are the priorities?

Case 3

- Periods regular, last 7 days, heavy x 5 days, changing a pad an hour for first day then q3h. Clots toonie size
- Has tried pill in past, not helpful
- Pain relieved somewhat with Advil and Tylenol, takes around the clock now
- PMHx nil, Psych history of anxiety and depression, history of sexual assault
- SHx – Was attending college out of town but because of pain and bleeding couldn't continue
- Meds - Fe

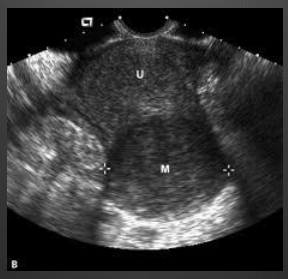
Case 3

- Exam reveals mass arising out of the pelvis above the umbilicus
- Firm. Tender in areas
- She states it has been like this for some time
- Never sexually active

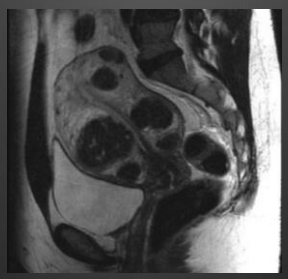
Case 3- Priorities?

- Diagnosis
- Stop bleeding
- Improve pain
- Leave uterus in situ for possible pregnancy in future
- How will we do these things?

Ultrasound



MRI



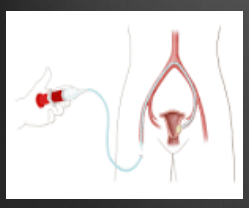
Medical options for fibroids causing pain/bleeding

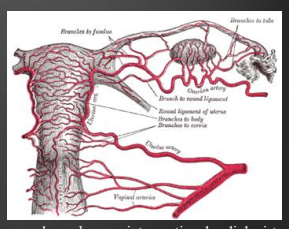
- DepoProvera
- Hormonal contraceptive
- LNG-IUS (Mirena)
- Fibristal
- GnRH agonist (eg Lupron) + hormonal addback

Surgical/Interventional radiology options for fibroids causing pain/bleeding

- Myomectomy (hysteroscopic approach for submucosal fibroid, laparotomy for other types, risk of bleeding, infection and hysterectomy)
- Hysterectomy – means no more periods and helps with pressure/pain symptoms
- Ablation – addresses bleeding and submucosal fibroids can be removed at same time
- Uterine Artery Embolization

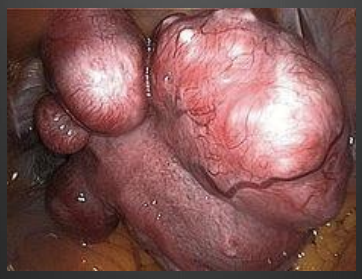
Uterine Artery Embolization





Uterine artery embolization (UAE) is a procedure where an interventional radiologist uses a catheter to deliver small particles that block the blood supply to the **uterine** body. The procedure is done for the treatment of **uterine** fibroids and adenomyosis.

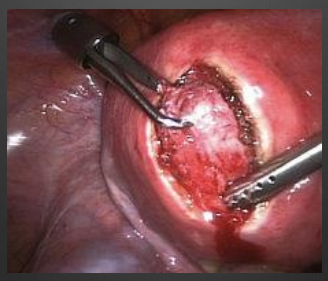
Fibroid uterus



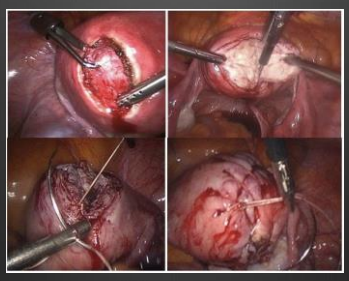
Case 3

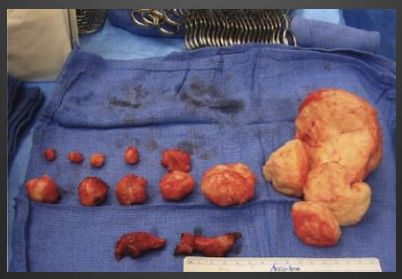
- This patient was managed on Lupron with hormonal addback until her drug plan expired. She then had a laparotomy for ongoing pain primarily. She later returned with increased bleeding and had hysteroscopic resection of a submucosal fibroid which settled bleeding.
- Then she moved to Vancouver, B.C.

Myomectomy



Myomectomy





Objectives

(It is the end. Hope you feel comfortable with…)

- Causes of acute and chronic pelvic pain
- Investigations to determine the cause of pelvic pain
- The presentation, theories of pathogenesis, common sites of implants and diagnosis of endometriosis.
- Discussing surgical and non-surgical treatment modalities for endometriosis.