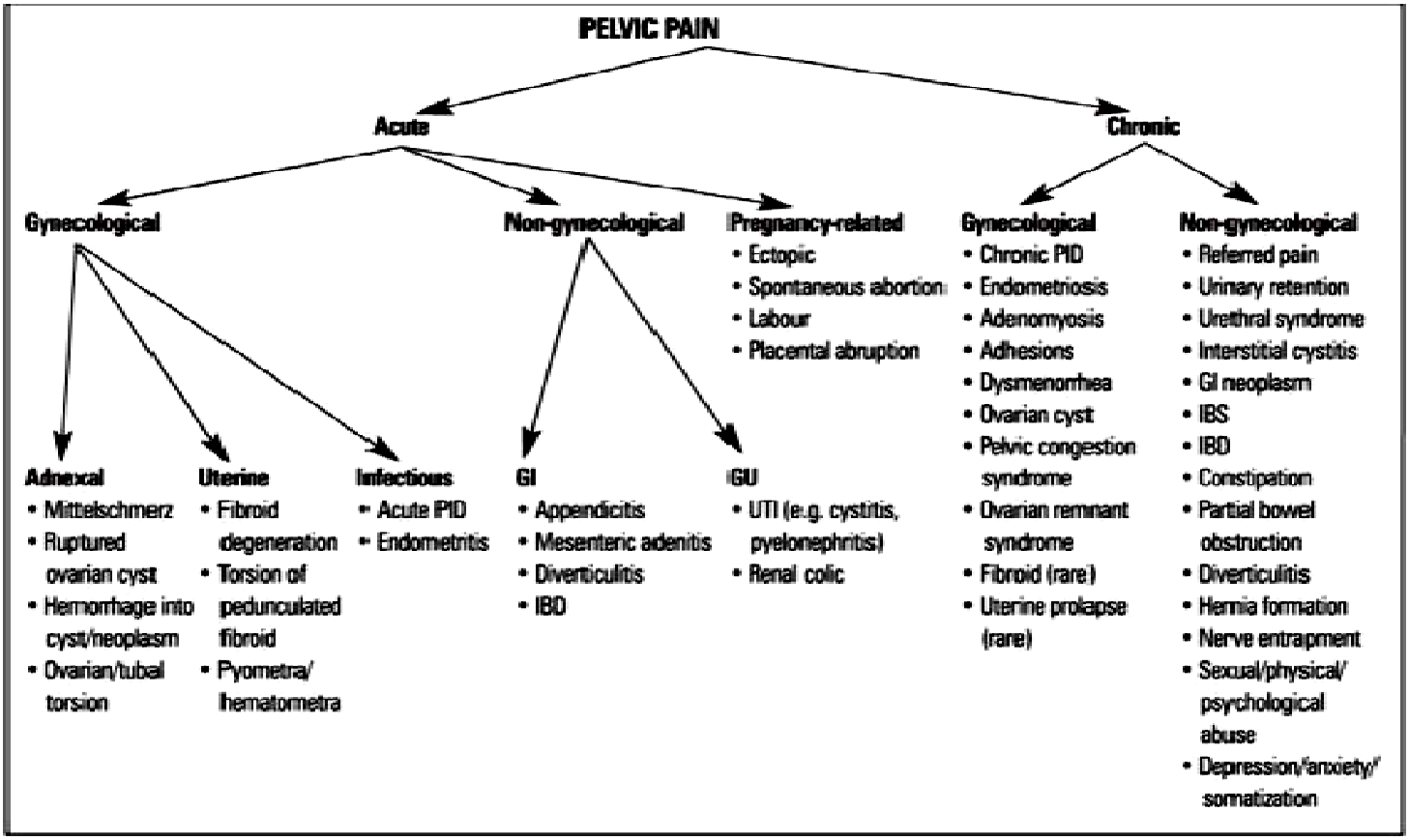
PELVIC PAIN IN GYNECOLOGY

Pelvic pain is an important part of clinical practice for who any clinician who provides health care for women. It can be acute, recurrent or chronic.

Differential Diagnosis:



ACUTE PELVIC PAIN

- Acute pelvic pain is a common problem and has multiple causes.
- Acute pelvic pain can be divided into gynecologic and non gynecologic etiologies.
- CAUSES:
    - Gynecologic Causes:
        - Pelvic pain is the 2nd most common gynecologic complications after vaginal bleeding.
        - Ruptured ovarian cyst is a common problem and follicular cysts rupture is the commonest ruptured cyst.
        - Liomyoma (fibroid): especially torsion of a pedunculated liomyoma or degeneration if she is pregnant.
        - Pregnancy related complications:
            - Ectopic pregnancy: Rupture, expanding, leaking?!!
            - Spontaneous abortion: Threatened or incomplete abortion.
            - Blighted ovum, abruptio placenta,…
        - Infection: PID, endometritis, tubo-ovarian abscess.
        - Dysmenorrheal and endometriosis: new onset of pelvic pain.

    - Non-gynecologic Causes:
        - GI:
            - Appendicitis, constipation, bowel obstruction, IBD, IBS, diverticulitis, …
        - GU:
            - Cystitis, pyelonephritis, ureteric calculi,…
        - Others: porphyria, aneurysm, hernia, zoster,…

    - Diagnosis:
        - History and Physical Examinations:
            - Analyze the pain: site, onset, course, duration, character, radiation,…
            - Associated symptoms: vaginal bleeding, vaginal discharge, bowel or bladder symptoms, …
            - Vital signs.
            - Gynecologic examination.
            - Abdominal examination.

- Investigation:
  - β-hcG is done for all women in child bearing age.
    - *N.B: All women in childbearing age with pelvic pain are assumed to be pregnant until proven otherwise.*
  - CBC with differential count, PTT, INR,…
  - Pelvic and abdominal US to evaluate adnexa.
  - Doppler flow study for ovarian tortion.

- Management:
  - General measures:
    - Analgesia.
    - Make sure that the patient is hemodynamically stable.
    - Determine if the patient needs admission.
    - Consults gynecologist as needed.
    - Consult general surgeon, urologist,.. as needed.
  - Specific:
    - Management of the cause.
    - Ruptured ovarian cysts:
      - If hemodynamically stable ⇒ analgesia and follow up.
      - If not stable ⇒ may require surgery.
    - Ovarian torsion:
      - Surgical detorsion or oophorectomy if needed.
    - Uncomplicated leiomyomas, endometriosis and secondary dysmenorrhea can usually be treated on an outpatient basis, discharge with gynecology follow-up.
    - PID: Broad spectrum antibiotics.

CHRONIC PELVIC PAIN

Definition:

- Pain present in the pelvis for 6 months or more.
- Characteristics of chronic pelvic pain are:
    - Duration: ≥ 6 months.
    - Incomplete relief by previous treatments.
    - Pain is out of proportion of tissue damage.
    - Signs of depression: behavioral and emotional changes.
    - Loss of physical functions.
    - Altered family dynamics.

Extra-uterine Causes:

- Pelvic Adhesive Disease (Adhesion):
    - Adhesion is commonly detected at time of surgical exploration of a patient with chronic pelvic or abdominal pain.
    - Though adhesion plays role in chronic pelvic/abdominal pain, it is not always associated by pelvic pain.
    - Adhesion may be more likely to result in limitation of mobility of intraperitoneal organs .
    - Causes:
        - Ruptured appendicitis.
        - Cancer.
        - Endometriosis.
        - Previous infection or surgery.
        - Radiation therapy.
    - Diagnosis:
        - It is difficult to diagnose site of adhesion by non-surgical methods.
        - Although physical examinations may suggest the site of adhesion based on limited visceral mobility, studies have found that to be poor predictor of location of adhesion visualized by laparoscopy.
        - Imaging studies are also unreliable.
        - Laparoscopy remains the gold standard for diagnosis of adhesion. It also, helps in initiation of treatment of any adhesion.
    - Management:
        - Adhenolysis using laparoscopy.

Chronic Ectopic Pregnancy:

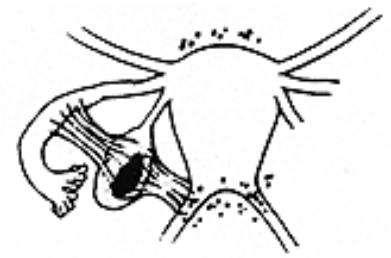
- Is a condition develops when ectopic pregnancy fails to resorb completely after expectant management.
- It arises when there is a persistence of chorionic villi which bleed into the tubal wall and distended slowly but doesn't rupture. It may result in repetitive small bleeding into the pelvis resulting in hematoma (pelvic hematocele).
- Some of chronic ectopic pregnancy resolves without treatment. However, don't wait for that as we are not sure if the patient may have another large bleeding.
- C/P:
    - Lower abdominal pain.
    - Small dark vaginal bleeding.
    - Mass: in lower abdomen, on sides of uterus, at Doglus pouch,…
    - It may be confused with PID.
    - Pregnancy may or may not be positive.
- Dx.:
    - Laparoscopy.
    - US
    - Coldecentesis

Chronic Pelvic Inflammatory Disease:

- It arises from untreated or inadequately treated PID particularly acute salpingoophoritis. The infection may resolve spontaneously but in expense of formation of diffuse intraperitoneal adhesions involving uterus, oviducts, ovaries, bowel and omentum.
- No active inflammation is present.
- C/P:
    - Bilateral lower abdominal-pelvic pain is characteristic.
    - Other symptoms are consequences of pelvic adhesion e.g., Infertility, Pain with intercourse,…
- Examinations:
    - No fever.
    - Adnexal mass.
    - No discharge.
- Lab.:
    - Culture: -ve.
    - WBCs & ESR are normal.
    - US: dilated hydrosalpinx.
    - Laparoscope: which is the definitive for diagnosis of adhesion.
- Management:
    - Analgesia: temporary treatment.
    - Lysis of adhesion.
    - Complete pelvic clean-out: TAH-BSO for total eradication of pain.
    - No role for antibiotics. (No infection).

Endometriosis:

- Is a condition in which endometrial glands with stroma are found outside the uterine cavity.
- Prevalence is more in multipara during the 4^{th} and 5^{th} decades of life.
- Location (*from the most common to the least*):
  - Ovary: the commonest site.
  - Cul-de-sac.
  - Uterosacral ligament.
  - Broad ligament.
  - Oviducts.



- Pathogenesis:
  - It is not clear but there are theories
    $\Rightarrow$Retrograde menstrual theory.
- Symptoms:
  - Dysmenorrheal.
  - Dyspareunia.
  - Dyschazia (painful defecation).
  - Infertility.
- Findings:
  - Retroverted uterus.
  - Uterosacral nodularity and tenderness.
  - Adnexia mass: $\Rightarrow$ ovarian endometriosis.
- Dx.:
  - Laparoscope.
- Management:
  - Medical: Danazole (antiestrogen) or leuprolide (GnRH analogue).
  - Surgical:
    - Conservative: adhenolysis for fertility.
    - Radical: TAH-BSO to relief the pain completely.

Ovarian Remnant Syndrome:

- Is a condition that occurs if any ovarian tissue is left after surgery; bilateral salpinoopherectomy.
- Associated with chronic pelvic pain in postmenopausal women.
- C/P:
  - Chronic pelvic pain: the most common.
  - Dyspareunia.
  - Cyclic pain.
  - Pressure on vagina, bladder and rectum.
- Pathophysiology:
  - The remnant ovarian tissues respond to hormonal changes, FSH.
- Diagnosis:
  - FSH, LH are normal.

- US: clomiphen and GnRH agonists may be used to stimulate ovarian tissue to make it more clear.

- Management:
  - Surgical removal of both ovaries.

Uterine Causes:

- Adenomyosis:
  - Endometrial glands with stroma are found in the myometrial wall.
  - Possibly, may result in cyclic bleeding into myometrium.
  - More common in mul paras women in 4th and 5th decades.
  - C/P:
    - Depend on depth of myometrial penetration.
    - Most of patient have minor symptoms or are asymptomatic.
    - Secondary dysmenorrheal or abnormal menstrual bleeding may be present.
  - Dx.:
    - US.
    - MRI.
  - Management:
    - No medical treatment.
    - Hysterectomy is the only definitive cure.

- Liomyoma:
  - The most common uterine tumor.
  - Types:
    - Intramural.
    - Subserous.
    - Submucus.
  - May have a wide base or pedunculated.
  - Examination: enlarged, firm, non-tender, asymmetric.
  - Dx.:
    - HSG or hysteroscopy : for submucus fibroid.
    - US and MRI: for intramural or submucus.
  - Management:
    - Conservative unless it is symptomatic.
    - Embolization.
    - Surgery: hystroscopic resection, or hysterectomy (definitive).

- Pelvic Congestion:
  - It is a condition presenting with chronic lower abdominal pain due to varicose veins in the lower abdomen. They are result of varicose veins developing during pregnancy secondary to effect of estrogen (vasodilatation and weakening vessels wall).
  - This pain is aggravated by standing and relieved by lying down.

- It is worsen just before the onset of menstrual period and during or after sexual intercourse.
- Dx.:
  - US: the most commonly used.
  - Laproscopy.
  - Venogram.
  - CT & MRI.
- Management:
  - Medical:
    - NSAIDs.
    - Suppressing ovarian function.
  - Embolization.

- Pelvic support defects:
  - Uterine prolapse, vaginal prolapse, cystocele, rectocele,…

- Chronic endometritis:

- Polyps.

- Urologic causes.

- GI causes.

- Muscloskeletal causes.

- Physical/Sexual abuse.

- Lead, Mercurry toxicity.

- Hyperparathyroidism.

- Porphyria.

RECURRENT PELVIC PAIN:

- Mittelschmerz:
  - It is a German term means "Middle Pain".
  - It is so called because it occurs in mid-cycle as result of ovulation. (ovulation pain).
  - About 20% of women experience Mi leschemerz.
  - Some experience that every cycle and some intermittently.
  - Treatment:
    - Not necessary.
    - Analgesia may be used.
    - OCPs may be used to prevent ovulation.

- Dysmenorrhea:
  - It is a condition characterized by excessive pain with menses that is so severe to alter the woman's daily activities.
  - Two types:
    - Primary dysmenorrheal.
    - Secondary dysmenorrheal.

Primary Dysmenorrhea	Secondary Dysmenorrhea
Cramping pain arising at the onset of ovulatory cycle usually within 2 years a er menarche	Cramping pain arising in the mid-reproductive years
No organic lesions Pathophysiology: PG mediated (PGF2α) $\Rightarrow$ uterine ischemia	Due to organic lesions e.g., endometriosis, adhesion, adenomyosis, liomyoma, cervical stenosis,…
Associated with prostaglandins related symptoms: Nausea, vomiting, diarrhea, headache,..	Not PG related symptoms. Associated symptoms include: Infertility, dyspareunia, dyschezia, vaginal bleeding,…
• Diagnosis: Clincally: Hx. & PE • Pelvic examinations are normal.	• Pelvic examination may show pathology • Pelvic US: liomyoma, adenomyosis • Laparoscopy: endometriosis, adhesion
Management: - PG inhibitors. - NSAIDs. - OCPs.	Management: - Varies according to the underlying pathology.

- Good Luck-