Chapter 100 – Gynecologic Disorders

Episode Overview:

1. Describe the presentation and RF for Adnexal torsion
2. List the imaging findings of adnexal torsion (US vs CT)
3. What is the management of adnexal torsion?
4. List different types of Ovarian Cysts
5. Describe the menstrual cycle
6. Describe the classification of Abnormal Uterine Bleeding in the non-pregnant patient
    a. Who needs a work-up for coagulopathy?
7. Describe the pharmacologic treatment options of Acute Abnormal Uterine bleeding
8. Describe the dosing, timeline, indications, and contraindications for emergency contraception.

Wisecracks

1. List 10 DDx for menorrhagia / vaginal bleeding
2. Spaced Repetition: List 6 life threatening causes of acute pelvic pain in women
3. Spaced Repetition: List 8 Dx of pelvic pain in women that are of reproductive tract origin (not pregnant)

Rosen's in Perspective

Pelvic pain and Vaginal bleeding is a common presentation in our departments!!!

REMEMBER: all females or biologically anatomic females of childbearing potential are PREGNANT UNTIL PROVEN OTHERWISE

After that, we look for life or organ threats (think massive bleeding or ovarian torsion etc).

This chapter looks specifically at common some common entities:

- ❑ Ovarian torsion
- ❑ Ovarian cysts
- ❑ Abnormal uterine bleeding
- ❑ Emergency contraception

Some important Definitions to jog your memory:

- ❑ Menorrhagia: > 80ml or longer than 7 days
- ❑ Abnormal Uterine bleeding: excessive bleeding **PRIOR TO** exclusion of pathologic causes
    - ❑ Premenarchal: always abnormal
    - ❑ Reproductive age: “a change in the frequency, duration or amount of bleeding, or bleeding between menstrual cycles”
    - ❑ Postmenopausal: any bleeding 1 year after cessation of menses
- ❑ Dysfunctional uterine bleeding: excessive bleeding **AFTER** exclusion of pathologic causes *** THIS TERM IS NO LONGER USED ***

1) Describe the presentation and RF for Adnexal torsion

Primer: Adnexal torsion = ~approximately 3% of gynecologic emergencies

Def: Happens when the ovary and fallopian tube on twist on the axis between the utero-ovarian and infundibulopelvic ligaments.

- ❏ Usually as one unit, but ovary and tube can (RARELY) independently twist on their own.
- ❏ Usual saving grace is double arterial blood supply to ovary (uterine and ovarian arteries)
- ❏ Progression of venous & lymphatic congestion → ovarian edema → ischemia → necrosis → possible hemorrhage / infection / peritonitis

Presentation: Sneaky diagnosis, often missed! Pre-surgery diagnosis only ~40%

Typical sudden onset sharp, severe unilateral abdo pain. +/- Nausea / Vomiting.

Risk Factors:

- ❏ Reproductive age
  - ❏ 2^o to regular development of corpus luteal cysts during menstrual cycle
- ❏ Relative adnexal mobility: seen in premenarchal patients
- ❏ Enlarged ovary (>5.0 cm)
  - ❏ Benign neoplasm or cysts,
  - ❏ Recent Infertility Treatment (ovulation induction & hyperstimulation syndrome)
  - ❏ polycystic ovarian syndrome
- ❏ Pregnancy: Torsion rare but possible in 1st and early 2nd trimesters
- ❏ Hx/ tubal ligation

Note: “Masses prone to creating adhesions, such as malignant tumors, endometriomas, or tubo-ovarian abscesses, are less likely to develop torsion than benign lesions.” Rosen’s 9th edition

2) List the imaging findings of adnexal torsion (US vs CT)

Ultrasound:

- Enlargement of ovary
- Associated ovarian mass
- Loss of enhancement
- Edema
- Free pelvic fluid
- Loss of venous waveforms
- Loss of arterial waveforms

CT:

- Enlargement of the ovary
- Associated ovarian mass
- Thickening of the fallopian tube
- Free pelvic fluid
- Edema of the ovary
- Deviation of the uterus to the affected side
- Associated hemorrhage

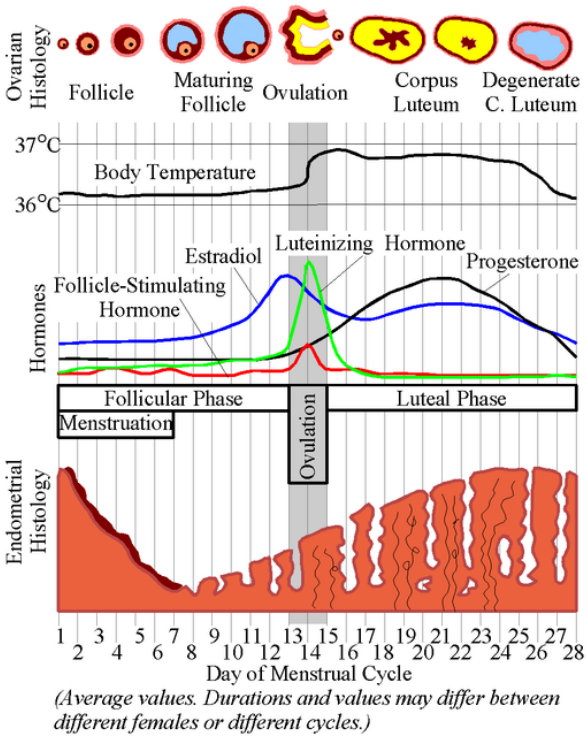
3) What is the management of adnexal torsion?

- ❑ Treat pain & N/V
- ❑ Volume resuscitate if ++ vomiting
- ❑ Labs & R/O pregnancy
- ❑ Obtain imaging
- ❑ STAT OB/GYN Consult for OR

4) List different types of Ovarian Cysts

- ❑ Follicular cyst
  - ❑ 1st half of menstrual cycle
  - ❑ MOST COMMON type of cyst
  - ❑ Pathologic when > 3.0 cm
  - ❑ Thin-walled & filled with clear fluid
- ❑ Corpeus luteum cyst
  - ❑ 2nd half of menstrual cycle
  - ❑ Often filled w/ hemorrhagic fluid
- ❑ Benign Cystic Teratoma (dermoid cyst)
- ❑ Endometriomas (chocolate cysts),
- ❑ Fibroma
- ❑ Cystadenoma
- ❑ various types of malignant neoplasms

5) Describe the menstrual cycle



(Average values. Durations and values may differ between different females or different cycles.)

From: https://menstrual-cycle-calculator.com/menstrual-cycle-calculating-manually/

6) Describe the classification of Abnormal Uterine Bleeding

SInce 2011, we have a new terminology scheme here. Its no Lippism, but sounds cool.

Box 90.2

PALM-COEIN

PALM – Structural Causes
- Polyp
- Adenomyosis
- Leiomyoma (submucosal or other)
- Malignany and hyperplasia

COEIN
- Coagulopathy
- Ovulatory
- Endometrial
- Iatrogenic
- Not yet classified

Who needs w/o for potential coagulopathy?
- ❑ FamHx bleeding disorders
- ❑ Heavy menses
- ❑ Mucosal surface / post dental procedure bleeding
- ❑ Easy bruising
- ❑ Excessive bleeding with surgery

Pearl: Von Willebrand's is the most common coagulopathy

7) Describe the pharmacologic treatment options of Acute Abnormal Uterine bleeding

(See Table 31.1 for suggested doses and contraindications - Chapter 31 9th edition)

Drugs
- Hormonal treatments (conjugated equine estrogen)
- Combination oral contraceptive pills
- Progestin-only contraceptive pills
- NSAIDs
- Ibuprofen
- Mefenamic (tranexamic) acid
- Naproxen

***Note: Mefenamic Acid = Tranexamic Acid

8) Describe the dosing, timeline, indications, and contraindications for emergency contraception

"Morning after pill"
3 forms:

- ❏ Ulipristal acetate
  - ❏ progesterone receptor modulator,
- ❏ Levonorgestrel
  - ❏ Progestogen- progesterone receptor agonist
- ❏ OCP
  - ❏ Combination of progestin and estrogen
  - ❏ "Yuzpe method"
  - ❏ Fallen out of favour

IUD: Copper vs Mirena (not used as emergency contraception)

Agent	Dosing	Tx Window (from intercourse)	Contraindications
ulipristal acetate	Single 30 mg dose	Up to 120hrs	• Known or suspected pregnancy • Hypersensitivity to ulipristal acetate • breast-feeding; • genital bleeding of unknown etiology • severe liver diseases • Severe asthma on steroids (antiglucocorticoid effects)
Levonorgestrel "**Plan B**"	Single 1.5mg dose Or 0.75mg Q12 x 2 doses	Up to 72hrs	• Known or suspected pregnancy • hypersensitivity to levonorgestrel or any component of the formulation; • undiagnosed vaginal bleeding
Copper IUD	Single device	5 days	• Septic pregnancy or abortion • abnormal vaginal bleeding • untreated cervical / uterine cancer • malignant gestational trophoblastic disease • STI or PID in last 3 months

Wisecracks

1) List 10 DDx for menorrhagia / vaginal bleeding

From Episode 34:

	Prepubertal	Adolescent	Reproductive	Perimenopausal	Postmenopausal
Most common	Vaginitis	Anovulation	Pregnancy	Anovulation	Endometrial lesions including cancer
	Anovulation	Pregnancy	Anovulation	Uterine leiomyomas	Exog hormone use
	Genital trauma or foreign bodies	Exog. hormone use	Exog hormone use	Cervical and endometrial polyps	Atrophic vaginitis
		Coagulopathy	Uterine leiomyomas	Thyroid dysfunction	Other tumor (vulvar, vaginal, cervical)
Least common			Thyroid dysfunction		

Structural causes

- Polyps, fibroids, malignancy, hyperplasia, endometriosis

Non-structural causes

- Coagulopathies (VWF, Factor XI deficiency, thrombocytopenia, ITP)
- Endocrine (PCOS, Hypothyroid, Hyperprolactinemia, Adrenal hyperplasia, Cushing's)
- Weight loss, extreme exercise
- Stress
- Obesity
- Trauma (sexual abuse)
- Infections (STIs, tuboovarian abscess, vaginitis)
- Systemic disease (liver or kidney disease)
- Foreign bodies
- Medications (Antiepileptics, Antipsychotics, Anticoagulants, Hormonal medications, Steroids)
- Intrauterine device

2) List 6 life threatening causes of acute pelvic pain in women

Life threatening diagnoses NOT to miss:

a. *PID*
b. *Tubo-ovarian abscess*
c. *Ectopic pregnancy*
d. *Hemorrhagic ovarian cyst (ruptured)*
e. *Appendicitis*
f. *Bowel/uterine perforation*

3) List 8 Dx of pelvic pain in women that are of reproductive tract origin (not pregnant)

Reproductive tract

a) Ovarian torsion / cyst / uterine perforation - mechanical
b) PID / Salpingitis / endometritis / TOA - infectious
c) Endometriosis / fibroids / neoplasm – neoplastic
d) Dysmenorrhea - dx of exclusion