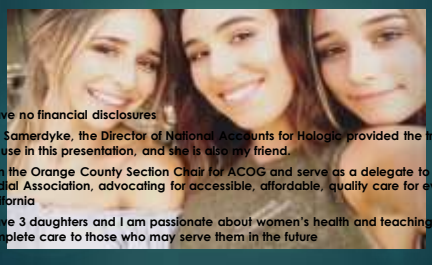
# of AUB

DR. DEBRA GIERUT MD
DEPARTMENT OF OBSTETRICS AND GYNECOLOGY
KAISER PERMANENTE, ORANGE COUNTY

DISCLOSURES



- I have no financial disclosures
- Lisa Samerdyke, the Director of National Accounts for Hologic provided the trimmed video I will use in this presentation, and she is also my friend.
- I am the Orange County Section Chair for ACOG and serve as a delegate to the California Medial Association, advocating for accessible, affordable, quality care for everyone in California
- I have 3 daughters and I am passionate about women's health and teaching quality and complete care to those who may serve them in the future

Definitions

- Bleeding from the uterus that is abnormal in regularity, volume, frequency, or duration in the absence of pregnancy
- Classify as **acute** or **chronic** (>occurring for ≥ previous 6 months)
- Acute may be spontaneous or in the context of chronic bleeding.
- It is worth knowing, is the patient pre or post menopausal
- 9-20% of reproductive age women have significant AUB that interferes with quality of life
- Accounts for about 1/3 of ambulatory visits to gynecologists
- Significantly impacts a women's quality of life, productivity, expense of hygiene products, and utilization of health care resources

FIRST THINGS FIRST

- Pregnant or not?
- Menopausal or not?
- Determine acuity
- Rule out "bad" things-

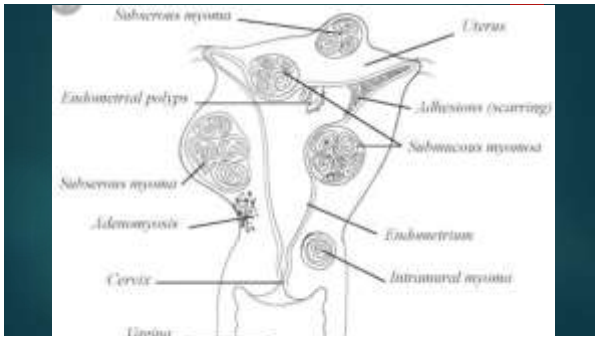
RULE #1

- Make a plan

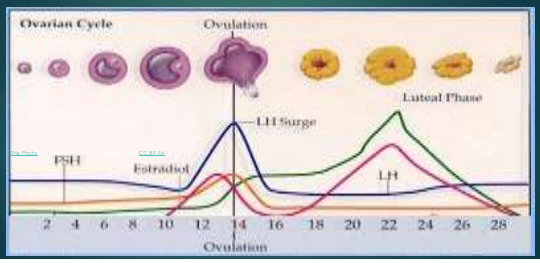
Hemodynamically Unstable or Hypovolemic

- Take your own pulse
- Ask for help
- 1-2 large bore IV lines
- Initiate procedures for transfusion of blood and clotting factors

Anatomy, Anatomy, Anatomy



Menstrual Cycle



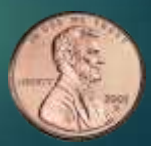
Consider The Etiology

2011 IFGO and ACOG adopted new classification system

PALM-COEIN

Abnormalities of **UTERINE STRUCTURE** versus **NOT** related to UTERINE STRUCTURE

Ovulatory or Anovulatory



PALM

- Polyp
- Adenomyosis
- Leiomyoma
- Malignancy

COEIN

- COAGULAPATHY
- OVULATORY
- ENDOMETRIAL
- IATROGENIC
- NOT YET CLASSIFIED

Considerations

- 13% of women with AUB may have a variant of von Willebrand disease
- 20% may have underlying coagulation disorder
- Underlying medical conditions or medications

Rare causes: Uterine AV malformations (congenital or acquired), cesarean scar defects.

Anovulation AUB

Generally at irregular intervals and excessive in in duration or volume

- PCOS
- Diabetes Mellitus
- Thyroid dysfunction
- Hyperprolactinemia
- Antipsychotics
- Antiepileptics
- Pregnancy
- Eating disorder

Ovulatory AUB

Generally, regular timing but excessive in amount or duration

50% of these women have no discernable cause-

?Adenomyosis?

- Thyroid dysfunction
- Coagulation defects
- Polyps
- Submucosal fibroids

Endometrial polyps

- Polyps are overgrowths of endometrial glands and stroma over a vascular core.
- The natural history of polyps is unknown and not likely related to age, menopausal status or size or growth rate of the polyp
- < 2% were hyperplasia or malignancy in premenopausal patients
- <6% were hyperplasia or cancer in postmenopausal women

Evaluation

- History, History, History, History (including menarche, family history, timing of when blood is seen)
  - *Is patient pregnant, still in reproductive phase, peri or post menopausal?
  - *Pattern, Severity, and Source (PSS)
- Pregnancy test, CBC, TSH
  - Possible need for fibrinogen, ptt, VW-ristocetin, VWB antigen, Factor VIII, LFTs
- Physical examination
- Endometrial Sampling
- Ultrasound

WHAT TO DO FIRST???

Depends on what you suspect, what you need to know, and what you plan on doing about it.....

Remember RULE #1: Rule Out Bad Things

- Labs
- Endometrial Sampling: general rule: any AUB at age ≥45 or age ≥40 with obesity (BMI >30).
- Ultrasound?
- Sonohystogram?
- Hysteroscopy?

Endometrial Cancer

- Worldwide incidence is about 9/100,000. lifetime risk is 1%
- **Recurrent anovulation** can cause endometrial cancer
- 10-20% of endometrial cancers are in premenopausal women. Overall risk for endometrial cancer in the premenopausal women is 1.3%
- Risk factors: obesity, nulliparity, AUB, advanced age (>50y/o), DM unopposed estrogen therapy tamoxifen use, family history of uterine, ovarian or colon cancer
- Precursor to endometrial cancer is endometrial hyperplasia WITH atypia. If untreated 30% progress to cancer. 43% have underlying undiagnosed adenocarcinoma
- Endometrial hyperplasia without atypia- considered benign. < 5% progress to cancer

LABS

- HCG*
- CBC*
- TSH
- Prolactin
- If coagulation defect suspected- VWF, PT, PTT
- FSH, E2- in special circumstances
- Pap/HPV
- GC, Chlamydia, if indicated for R/O cervicitis
- STD screening?

* Everyone has these tests

Endometrial biopsy

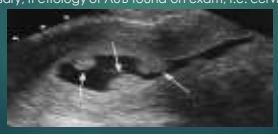
"TISSUE IS THE ISSUE"

PROS:

- Easy to do
- Low risk
- Can be done at the time of initial evaluation
- Rules out malignancy, primarily
- 98% specific, 91% sensitive for carcinoma detection
- All agree that IMB should lead to EMB. Age and risk factors may influence decision for EMB. Heavy flow not as well associated with cancer
- **CONS:**
- Pain
- May not be able to get adequate sample
- Does not answer questions about anatomy

ULTRASOUND

- Tells us about external and internal anatomy of the uterus and the adnexa
- May allow for better planning for surgical and non surgical options
- In a menopausal patient may obliviate need for painful biopsy if the EMS is less than 4 mm
- **Sonohystogram** may help diagnose intracavitary lesions. Improves sensitivity and specificity for intracavitary abnormalities
- Not necessary, if etiology of AUB found on exam, i.e. cervical polyp.



HYSTEROSCOPY

PROS:

- Intimately evaluate the internal anatomy of the uterus
- Sampling of the endometrium can be done simultaneously
- Remove potentially offending pathology
- Potentially facilitates see and treat in one visit
- Anesthesia provides more comfortable evaluation and treatment

CONS:

- Increased risk: infection, injury to viscera, complications of fluid overload hemorrhage risk 2.4%, perforation risks 1.5%
- Increased expense
- Increased risk if done in OR with general anesthesia

Treatments

Goal is to CONTROL acute episode, and then to reduce menstrual blood loss in SUBSEQUENT cycles

- First line is almost always medical management with hormone therapies
- Only US FDA approved treatment specifically for acute AUB is IV conjugated equine estrogen
- Surgical management, only if needed based on underlying medical conditions, unresponsiveness to medical interventions, or hemodynamic instability

Medical Management

ACUTE

- IV conjugated equine estrogen- 25 mg q 4-6 hours x 24 hours
- Combination OC- TID x 7 days
- Oral Progestins (medroxyprogesterone acetate)- 20 mg TID x 7 days if ovulatory menorrhagia, may need 12 days a month of therapy
- NSAIDs- Ibuprofen, Naprosyn, Mefenamic Acid
- Tranexamic acid (*Lysteda*)-1.3 g orally TID x 5 days (better for chronic AUB)
- If VWD- desmopressin (intranasal, IV or subQ)
- Possible need for blood transfusion and/or factor replacement

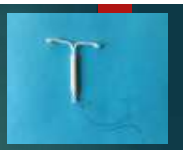
OC and progestins work to stop 78-88% in 3 days

TXA- 30-55% reduction in bleeding in chronic AUB

Levonorgestrel IUD

- Superior to all other alternative in cost and Quality of Life scores (compared to ablation, hysterectomy)
- In the obese patient, 73% effective at 6 months, 93% at 12 months with improved productivity, fatigue, less depressing, improved hygiene
- Can be placed at the time of hysteroscopy
- FDA approved for use for 5 years

Longer Term Medical Interventions…



CHRONIC

- **Levonorgestrel IUD-** about $9/month
- **OCs-** about $9-90/month
- **Progestins**(oral or intramuscular)$13 60/month
- **NSAIDS-** $4/month
- **Tranexamic acid-** $170/month

Surgical Management

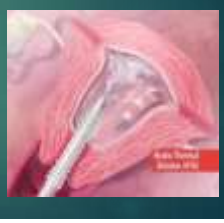
- Dilation and Curettage
- Endometrial Ablation- 5 years our 30% need 2nd operation
- Uterine Artery Embolization (UAE)
- Hysteroscopy with polypectomy and/or myomectomy
- Hysterectomy

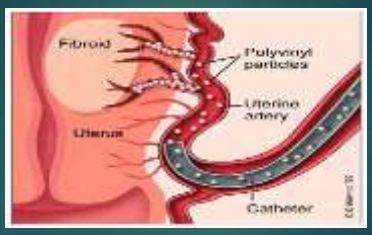
Choice depends on anatomic abnormality, desires for future fertility, patient's clinical condition and stability, and bleeding severity

20% of AUB not definitively treated will reoccur

Dilation and Curettage

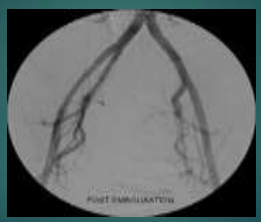
Endometrial Ablation

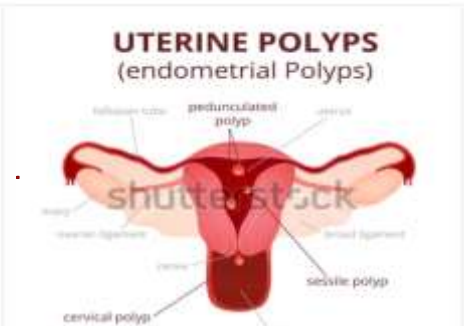




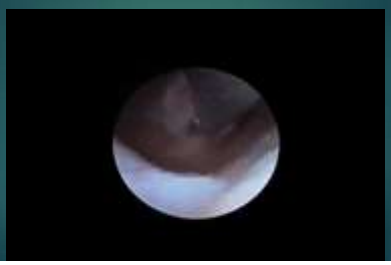
Embolic materials: Gelatin sponge silicone spheres, gelatin microspheres , metal coils, poly vinyl alcohol particles
Possible embolic spread, decreased ovarian reserve, shedding of necrotic myoma in uterine cavity
Fertility concerns

Uterine Artery Embolization





Hysteroscopy with Polyp Removal



Our KP Hysteroscopy experience…

- Office hysteroscopy since 2005
- Average cost is roughly <$100, - Saves OR time, OR staff and anesthesia. OR is about $2500 (saves at least 1.5 million a year)
- Our experience: about 600-700 per year (combination of Essure, Myosure, ablations, diagnostics)
- In addition to improved safety, consistency (provider, staff equipment), monetary savings of about ….

Hysterectomy

Emerging issues in AUB…

- AUB in the context of obesity
- BMI≥ 30 – 4x more likely to develop hyperplasia or cancer
- Use of **ULIPRISTAL ACETATE** for AUB and/or fibroids (2018 study)at dose of 5-10 mg daily x 12 weeks

SUMMARY

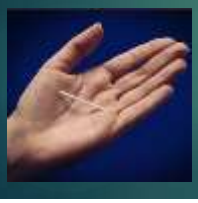
- A good history and physical are priceless
- Rule out "Bad Things"
- Think "with the end in mind"- what is the goal of evaluation and therapy. Think efficiency
- Remind patients that TREATMENT PLANS can change, as symptoms and concerns change.

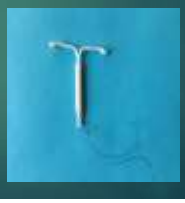
Patient #1

Suzy is a **26** y/0 G0 with AUB (menometrorrhagia) for the past 2 years. She is now missing work due to fear of accidents with **heavy, unexpected** bleeding episodes. She is a **flight attendant**. She is **sexually active** with her Yogi boyfriend and is not using birth control as he does not want her to "ingest chemicals". Susy also remembers that when she used OCs as a teen, her **migraines with aura** got worse. Her **BMI is 35**, now that she had **gastric bypass**. Suzy is interested in **contraception** and decreasing her blood flow each month so she does not miss work. She does **want children** in the future but not for at least 2 years.

- What lab tests are warranted?
- Are there medical or social issues in her history that warrant ultrasound? Endometrial sampling?
- What options would best serve her for her needs?
- What do you think etiology is? :"PSS"

Labs: HCG, CBC, TSH, Prolactin, STD screening Pap/HPV
US for anatomy evaluation
+/-EMB versus hysteroscopy with LVN IUD





Patient #2

Helen is a **47 y/o** G3P3 executive with new onset of AUB (menorrhagia). She is newly divorced and deeply committed to **online dating**. She has no method of contraception on board (her ex had a vasectomy). She also reports some **night sweats**, **especially around the time of her menses**. Menses are spacing out but lasting longer and heavier (10+days). She remembers being told at some point that she had **fibroids**. Exam is remarkable for normal BMI and mild globular 9 week size uterus with no other palpable masses.

- Does Helen need endometrial sampling? Ultrasound? Labs?
- Is there a role for hysteroscopy?
- What contraception options may also provide a treatment strategy for her menorrhagia?
- Is an Endometrial Ablation a good option??

Labs: CBC,TSH, STD screening, Pap/HPV
Ultrasound
Hysteroscopy- **YES!!!**

- Hysteroscopy: See, sample and treat with anesthesia in place
- May need ERT for perimenopausal symptoms. Progestin of L-IUD could serve as endometrial protection and contraception
- Ablation is **not** a good option if fibroids. It is also **not** a form of contraception


THANK YOU