

EVALUATION OF ABNORMAL UTERINE BLEEDING: NON-STRUCTURAL ETIOLOGIES

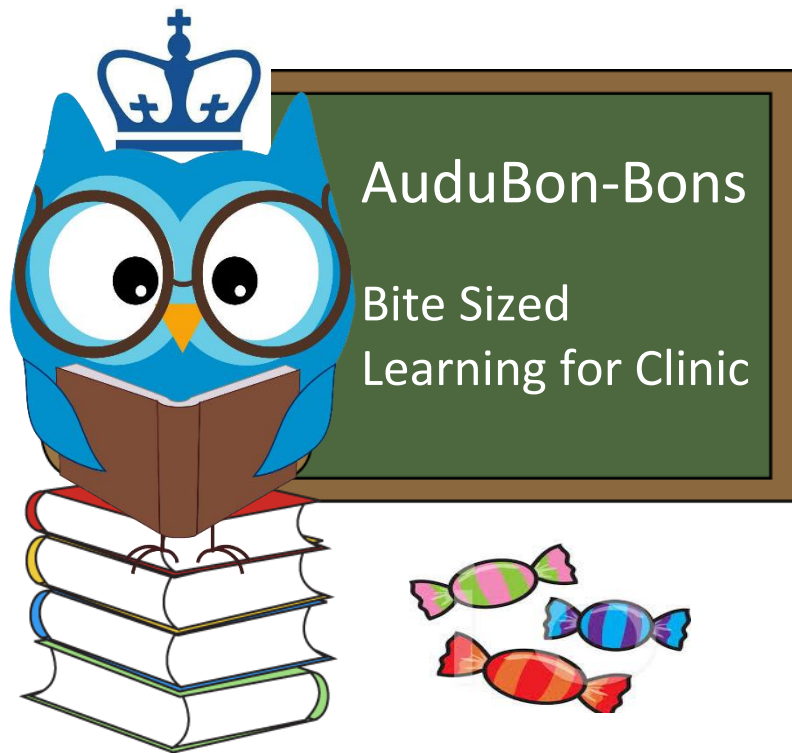
Week 48

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With SDH and .phrase slides by Chloé Altchek, MS4

Reading Assignment:

ACOG, Practice Bulletin No. 128, “Diagnosis of abnormal uterine bleeding in reproductive-aged women.”



LEARNING OBJECTIVES



- Understand the definition of a normal menstrual cycle and abnormal uterine bleeding
- Become familiar with the PALM-COEIN classification system for AUB
- Learn how to evaluate patients for non-structural causes of AUB, including appropriate lab testing



CASE VIGNETTE

Patient is a 46 yo G5 P1041 woman who presents for a new GYN visit. She reports irregular cycles for the past 10 years. Her last visit to a gynecologist was 15 years ago after the delivery of her son.

Her periods come at variable intervals, sometimes every three months, other times twice in a month. Flow varies from minimal spotting to heavy bleeding requiring pad changes every hour. She reports dysmenorrhea with her periods that is relieved with ibuprofen.

She reports a 30 pound weight gain over the past 10 years. Otherwise, she denies any new medical issues.



FOCUSED HISTORY

What will be pertinent in her history?

- **POB:** 4x surgical VTOPs, 1x C/S at term for arrest of descent
- **PGYN:** Menarche at 13 yo; history of monthly cycles lasting 5 days until recently; denies history of STIs/abnormal paps/ fibroids/ cysts; last pap smear 15 years ago; not using contraception; sexually active
- **PMH:** Denies
- **PSH:** 4 x D&C, 1x C/S, 1x lapx cholecystectomy
- **FH:** Mother s/p hyst for fibroids, sister with fibroids
- **SH:** No toxic habits; unemployed; long-term partner; accepts blood products
- **Meds:** None
- **All:** NKDA



PERTINENT PHYSICAL EXAM FINDINGS

What will be pertinent in her physical exam?

VS: P 99 BP 155/80 **Wgt:** 103kg **Hgt:** 166cm **BMI:** 37.4 kg/m²

- **General:** NAD, well-appearing
- **Chest:** CTAB
- **CVS:** RRR
- **Abd:** Obese, soft, NT/ND, no masses/HSM
- **GU:** NEFG, no lesions; normal vaginal mucosa; no CMT; no uterine/adnexal tenderness; uterus 8 week size; no adnexal masses
- **Ext:** WWP, 1+ edema b/l



NORMAL MENSTRUAL CYCLE

How do you characterize a normal menstrual cycle?

- Every **21-35** days
- Variation between cycles usually **7-9** days
- Lasts on average for **5** days, between 2-7 days
- Volume up to **80** mL



ABNORMAL UTERINE BLEEDING

Abnormal uterine bleeding accounts for 70% of all gynecologic consults

What is the definition of AUB?

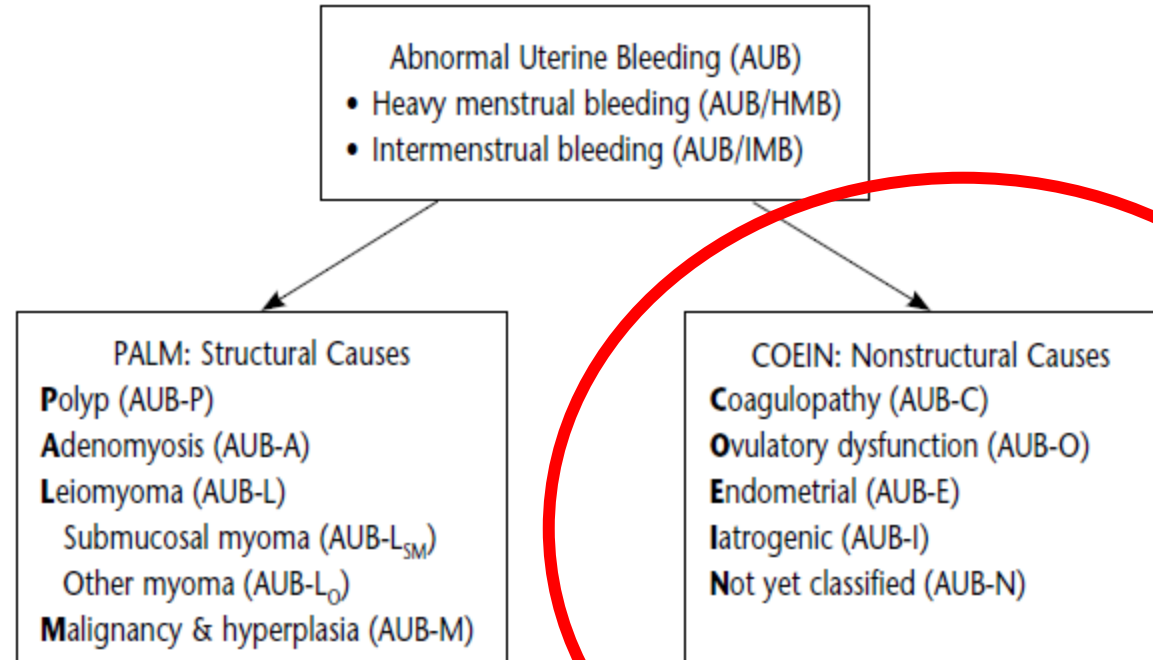
- Menstrual flow outside of normal volume, duration, regularity, or frequency

How do we classify AUB?

- PALM-COEIN system



PALM-COEIN CLASSIFICATION SYSTEM FOR AUB



DIFFERENTIAL: AGE BASED

Age Group

Common Differential Diagnosis

13-18 yo

- AUB-O (immature HPO axis)
- Hormonal BC use
- Pregnancy
- Pelvic infection
- Coagulopathy (seen in 19% of those hospitalized)
- Tumors

19-39 yo

- Pregnancy
- Structural lesions
- AUB-O (PCOS)
- Use of hormonal BC
- Endometrial hyperplasia
- Endometrial CA

40 yo-Menopause

- AUB-O (normal physiology, declining ovarian function)
- Endometrial hyperplasia
- Endometrial CA
- Endometrial atrophy
- Structural lesions

EVALUATION: HISTORY AND PHYSICAL

History

- Detailed menstrual history
 - Age of menarche/menopause
 - Bleeding patterns
 - Severity of bleeding
 - Pain
- Sexual history
 - Pregnancy, STI, trauma/IPV
- Medical conditions
- Surgical history
- Medications
- Family history
- Social History
 - Exercise/diet, toxic habits

Thyroid disorders
PCOS
Chronic kidney disease
Celiac disease
Bleeding diatheses
Hepatic disease
Malignancy

Anticoagulants
NSAIDs
Hormonal contraception/HRT
Gingko, Ginseng, Motherwort
SERMs
Antipsychotics



EVALUATION: HISTORY AND PHYSICAL

What information in your patient's history would make you concerned about a **bleeding disorder?**

- Heavy menstrual bleeding since menarche
- One of the following:
 - PPH
 - Surgery related bleeding
 - Bleeding associated with dental work
- Two/more symptoms:
 - Bruising 1-2x/mo
 - Epistaxis 1-2x/mo
 - Frequent gum bleeding
 - FHx of bleeding symptoms



EVALUTION: HISTORY AND PHYSICAL

General exam

- Obesity, signs of hyperandrogenism (acne, hirsutism), signs of thyroid disease (thyromegaly/nodule, exophthalmos), signs of insulin resistance (acanthosis nigricans), galactorrhea/discharge
- Signs of a bleeding disorder: petechiae, ecchymoses, skin pallor, swollen joints

Gyn/pelvic exam

- Cervical/vaginal lesions
- Uterine/adnexal abnormalities, masses



EVALUATION: TESTING

- **Pregnancy test**
- **CBC**
- **TSH (Prolactin)**
- **GC/CT (especially in high-risk population)**
- Other tests: at risk of bleeding disorders
 - CBC with platelets, INR/PT, PTT
 - von Willebrand-ristocetin cofactor activity, von Willebrand factor antigen, factor VIII
- Other tests: at risk of endocrinologic dysfunction
 - Prolactin, serum androgens, FSH/LH (POF), estradiol
- Other tests:
 - Pap smear



EVALUATION: TESTING

When is an **endometrial biopsy used as the first-line test?**

- Women 45+ yo with AUB

When is an **EMB appropriate in women < 45 yo?**

- Women with a history of unopposed estrogen exposure (i.e. PCOS, obesity), failed medical management of AUB, persistent AUB

If an **EMB is negative, but patient has persistent bleeding, what other tests can you perform?**

- D&C, hysteroscopy, further sampling
- If a cancer occupies < 50% of endometrial cavity surface area, it may be missed on EMB



EVALUATION: OTHER TESTS

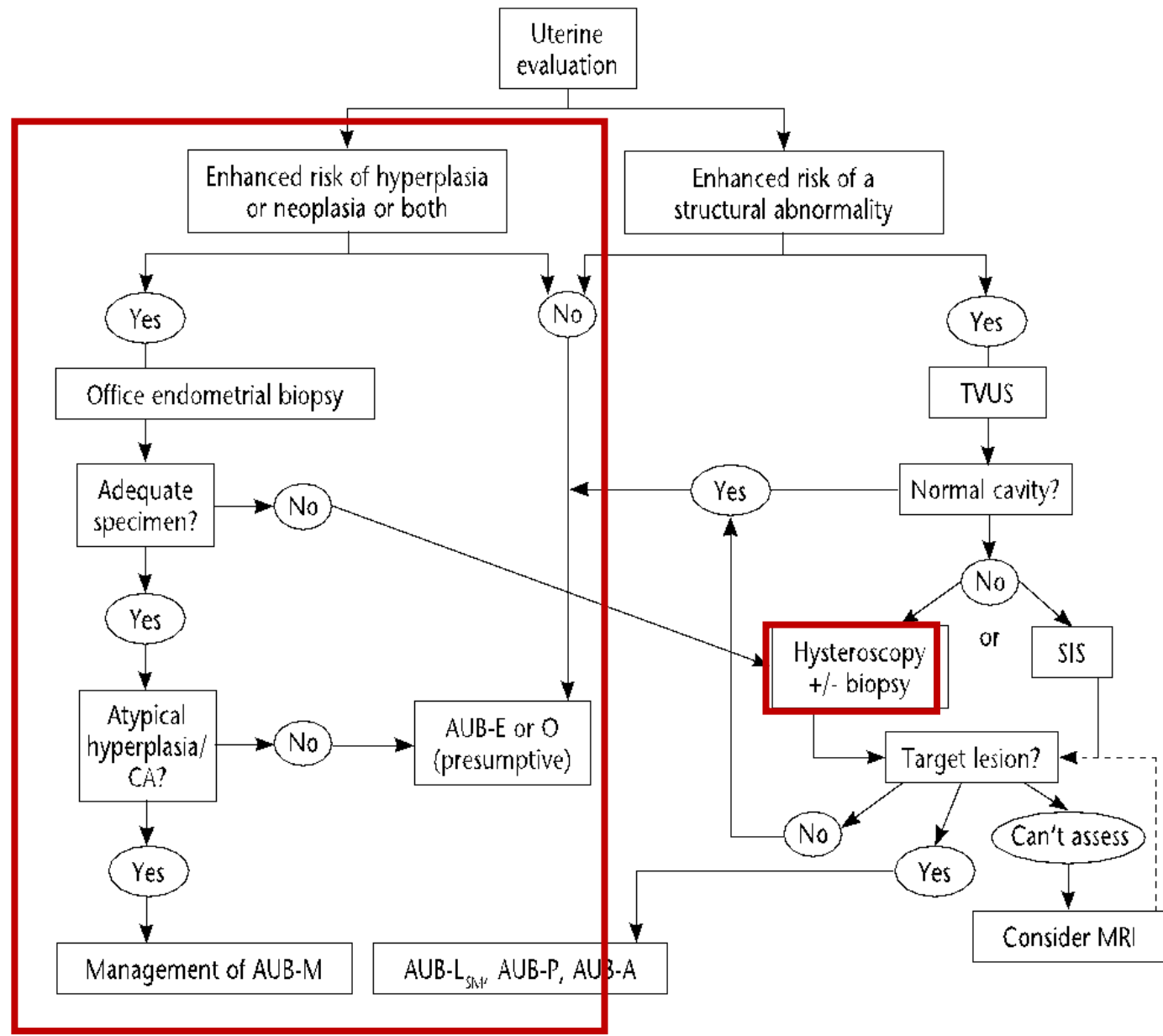
When is imaging recommended?

- Abnormal physical exam
- Symptoms refractory to treatment
- Persistent symptoms with a normal exam

What imaging modalities can be used?

- Transvaginal ultrasound (transabdominal for adolescents)
- Sonohysterography (superior for intracavitary lesions)
- Hysteroscopy
- MRI (select cases, i.e. myomatous uteri for surgical planning)





CASE VIGNETTE

What is your differential for the patient?

How would you work up the patient presented?



SOCIAL DETERMINANTS OF HEALTH

- AUB has significant **psychosocial implications**:
- Reasons many women **delay seeking treatment**:
 - Uncertainty if uterine bleeding is abnormal
 - Lower prioritization of gynecologic health
 - Difficulty accessing services (delay in appointments with gynecologists)

Economic

- Work loss 2/2 to AUB estimated to cost \$1692/yr per woman

Psychiatric

- Anxiety
- Depression
- Insomnia
- Excessive sleepiness
- Pain

Worsened Quality of Life

- Inability to contain blood flow
- Anxiety regarding embarrassment
- Unpredictability of changing plans (social, family, work) to avoid embarrassing bleeding

Taking the time to take a detailed menstrual history will help identify a woman who if unprompted, may not disclose symptoms related to their menstrual cycle that represent an underlying health problem.



EPIC .PHRASE

.BBonAUBWU

Description: AUB workup

We discussed the diagnosis of abnormal uterine bleeding and the most common etiologies for her age group, including ***AUB-O, hormonal contraceptive use, pregnancy, pelvic infection, coagulopathy, or pelvic tumor for ages 13-18, ***pregnancy, structural lesions, PCOS, or endometrial hyperplasia for ages 19-39, ***pregnancy, AUB-O, endometrial hyperplasia, cancer, endometrial atrophy, or structural lesions for ages over 40. A thorough evaluation was started today, including:

***age 13-18

Pregnancy test, CBC, INR, PTT, TSH, Prolactin, consider von Willebrand-ristocetin cofactor activity, von Willebrand factor antigen, factor VIII, GCCT (if sexually active)

***age 18-menopause

Pregnancy test, CBC, TSH, Prolactin, GCCT, pelvic ultrasound (consider SIS if concerned for structural abnormality), EMBx (if over 45, or <45 with hx unopposed estrogen, failed medical management, or persistent AUB), Pap (if over 21)



CODING AND BILLING

- **ICD-10**
 - **N93.9**, Abnormal uterine and vaginal bleeding, unspecified



EVIDENCE

- References
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