MANAGEMENT OF ABNORMAL UTERINE BLEEDING

FLAME LECTURE: 215

BURNS / LOPEZ 3.2.22

LEARNING OBJECTIVES

- Explain medical and surgical management options for patients with abnormal uterine bleeding
- Counsel patients about management options for abnormal uterine bleeding
- Prerequisites: FLAME 214 – EVALUATION OF AUB
- See also:
  - FLAME 214 – EVALUATION OF AUB
  - FLAME 216 – SURGICAL TREATMENT OF AUB

REVIEW OF AUB

Etiology: **PALM COEIN**

- Structural:
  - P – Polyps
  - A – Adenomyosis
  - L – Leiomyoma
  - M – Malignancy/hyperplasia
- Non-structural
  - C – Coagulopathy
  - O – Ovulatory
  - E – Endometrial
  - I – Iatrogenic
  - N – Not Otherwise Classified

Age-Based Differential	
	13-18 years
	Anovulation (HPA immaturity)
	Coagulopathy
	Pregnancy
	Pelvic Infection
	Contraceptive use
	19-39 years
	Structural lesions
	Anovulation (PCOS)
	Pregnancy
	Contraceptive use
	40-Menopause
	Anovulation (peri-menopause)
	Endometrial intraepithelial neoplasia/cancer
	Endometrial/vaginal atrophy
	Structural

TREATMENT OVERVIEW

- Identify etiology FIRST
  - Wide variety of treatments depending on cause
  - MANDATORY in women with high-risk for malignancy
- Treatment goals: decrease bleeding and make cycles regular
  - Consider fertility sparing vs. non-fertility sparing modalities
  - Consider risks and benefits of pharmacologic vs. surgical treatment
    - Some etiologies almost entirely responsive to medications while others more responsive to surgery

MEDICAL MANAGEMENT

Medical Management	Mechanism	Efficacy	Contraindications
Levonorgestrel IUD	Decreased endometrial thickening	↓ HMB 71-95%	Uterine structural abnormalities interfering with placement, current active pelvic infection
Cyclical oral progestin	Decreased endometrial thickening	↓ HMB 87%	Active/past DVT/PE, active/recent arterial thromboembolism, history for breast cancer, liver disease
Combined oral contraceptives (COCs)	Cycle regulation to prevent excess endometrial buildup and ensure regular lining shedding	↓ HMB 35-69%	Cigarette smoking if >35 yo, hypertension, hx of DVT/PE, cerebrovascular disease, ischemic heart disease, migraine with aura, breast cancer, liver disease
NSAIDs	Vasoconstriction to uterine arteries, anti-prostaglandin	↓ HMB 10-52%	Renal disease, gastrointestinal disease
Tranexamic acid	Antifibrinolytic	↓ HMB 26-54%	Acquired impaired color vision, current thrombotic disease
Depo-Provera	Progesterone Depot, decrease endometrial thickening	↓ HMB 49% after 2 months, amenorrhea in most after 2 yrs	Decreased bone mineral density, morbid obesity, severe depression
Levothyroxine	Corrects endocrine imbalance if AUB d/t hypothyroidism		
Desmopressin	Releases vWF in pts with coagulopathy from Von Willebrand disease		

SURGICAL MANAGEMENT

Fertility Sparing:

- Polypectomy
  - Removal of uterine polyps hysteroscopically
- Myomectomy
  - Surgical removal of just the fibroid
  - Indicated if fibroid becomes symptomatic or interferes with fertility
  - High rates of recurrence
  - Women with previous myomectomy entering endometrial cavity are at higher risk of uterine rupture, so typically should have C-section delivery in subsequent pregnancies

For women done with child bearing:

- Endometrial Ablation
  - Uses cautery, heated water, cryotherapy or electricity to ablate inside of uterus
  - Hormonal IUD (LNG IUD) vs. endometrial ablation produces similar reduction in blood loss and improvement in quality of life
- Uterine Artery Embolization
  - Uterine artery injected with (temporary) embolizing agent to decrease blood flow to uterus
  - Unilateral has higher rates of requiring secondary procedure (ex. hysterectomy) so bilateral embolization preferred
- Hysterectomy:
  - Surgical removal of the uterus
  - Can consider BS or BSO (bilateral salpingectomy OR bilateral salpingo-oophorectomy, aka removal of tubes and ovaries)
    - Induces menopause but reduces risk of ovarian cancer so benefits vs risks should be considered with patient

Polyp (AUB-P)

- Medical management:
  - **NSAIDs**
  - **Levonorgestrel IUD**
  - Expectant management
- Surgical management:
  - **Hysteroscopic resection**
  - **Endometrial ablation or endomyometrial resection**

Adenomyosis (AUB-A)

- Medical management:
  - **Continuous COC's** ideal, although fewer studies compared to LNG-IUD
  - **Hormonal IUD** improves both bleeding and pain but may need to be replaced more frequently than when used for contraceptives
- Surgical management:
  - *Endometrial ablation less effective*
  - **Hysterectomy** definitive treatment

Leiomyoma (AUB-L)

- Watchful waiting (most regress post-menopause)
- Tailor treatment to patient's symptoms and risk-factors
- Medical management: **COCs**, **progestin pills**, **hormonal IUD**
  - Hormonal IUD has greater reduction in blood loss compared to COC's (90% vs 13%)
- Surgical management: **myomectomy**, **uterine artery embolization, hysterectomy**
  - GnRH agonists suppress LH/FSH but have serious side effect profile so may be used perioperatively to reduce bleeding or fibroid size but not good for continuous medical management
- **See FLAME 227: Uterine Fibroids for more details**

Malignancy & Hyperplasia (AUB-M)

- Endometrial biopsy + Referral to Gynecology/Oncology
- Medical management: **hormonal IUD** for fertility sparing
- Surgical management: **Hysterectomy** + Staging
- **See FLAME 228: Endometrial Cancer for more details**

Coagulopathy (AUB-C)

- Referral to Hematology
- Medical management depends on etiology
  - **Desmopressin** if Von Willebrand Disease
  - Hormonal methods often beneficial
  - NSAIDS typically not indicated due to inhibition of platelets

Ovulatory Dysfunction (AUB-O)

- *Endocrine dysfunction so primarily managed medically*
- Medical management
  - **COCs** – make cycle more regular, thereby reducing heavy bleeding from endometrial build up
  - **Progestin-only pills**
  - **Levonorgestrel IUD**
    - No randomized trials comparing COC vs. progestin-only birth control
  - **Thyroid correction** if hypothyroid (hypothyroid > hyperthyroid as cause of AUB)
  - Prolactinemia →
    - **Cabergoline**
    - OR **Bromocriptine** (if patient trying to get pregnant)
- Surgical management – *rarely indicated*
  - Avoid endometrial ablation (may mask malignancy in future)

Causes of Anovulation:

Physiologic

- **Adolescence**
- **Perimenopause**
- **Lactation**
- **Pregnancy**

Pathologic

- **Hyperandrogenic** anovulation (eg, PCOS, congenital adrenal hyperplasia, tumors)
- **Hypothalamic** dysfunction (eg, 2° to anorexia nervosa)
- **Hyperprolactinemia**
- **Thyroid** disease
- Primary **pituitary** disease
- **Premature ovarian failure**
- **Iatrogenic** (eg, 2° to radiation or chemotherapy)
- **Medications**

Endometrial (AUB-E)

- Disorder of mechanisms regulating ***local*** uterine hemostasis
  - Imbalance of ↓endothelin, ↑prostaglandins, ↑plasminogen activator
- Medical management: **NSAIDs** (decrease prostaglandin), **tranexamic acid** (antifibrinolytic), **COC's** (decreased endometrial development)
- Surgical management: **Endometrial ablation**
  - Typically surgical management more effective

Iatrogenic (AUB-I)

- Management typically medical and tailored to cause if identified
- *Breakthrough bleeding* from COC's improved by supplementing with *additional estrogen*

Not Otherwise Classified (AUB-N)

- Diagnosis of exclusion: often chronic endometritis or AV malformation
- Needs close monitoring and *evaluation of malignancy risk factors*
- Medically manage symptoms: NSAIDs for pain/bleeding

IMPORTANT LINKS & REFERENCES

- Munro MG, Critchley HOD, Broder MS, Fraser IS, FIGO Working Group on Menstrual Disorders. FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age. Int J Gynaecol Obstet Off Organ Int Fed Gynaecol Obstet 2011; 113:3–13.
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- ACOG Practice Bulletin Number 128. Diagnosis of Abnormal Uterine Bleeding in Reproductive-Aged Women. July 2012
- ACOG Practice Bulletin Number 136. Management of Abnormal Uterine Bleeding Associated With Ovulatory Dysfunction. July 2013
- UpToDate – Management of Abnormal Uterine Bleeding