MANAGEMENT OF HEAVY MENSTRUAL BLEEDING

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Abnormal Uterine Bleeding (AUB) vs Heavy Menstrual Bleeding (HMB)

- AUB: Any aberration of menstrual volume, regulation, frequency, and duration
- HMB: Increased menstrual volume, regardless of regularity, frequency or duration
  - *Interferes with woman's physical, emotional, social or material* ***quality of life***
    - International Federation of Gynecology and Obstetrics
  - *Bleeding longer than 7 days or blood loss >80mL*

Haamid, Fareeda et al. "Heavy Menstrual Bleeding in Adolescents" *Journal of Ped and Adolescent Gyn.* **30** (2017) 335-340

PALM (structural) COEIN (non-structural) classification

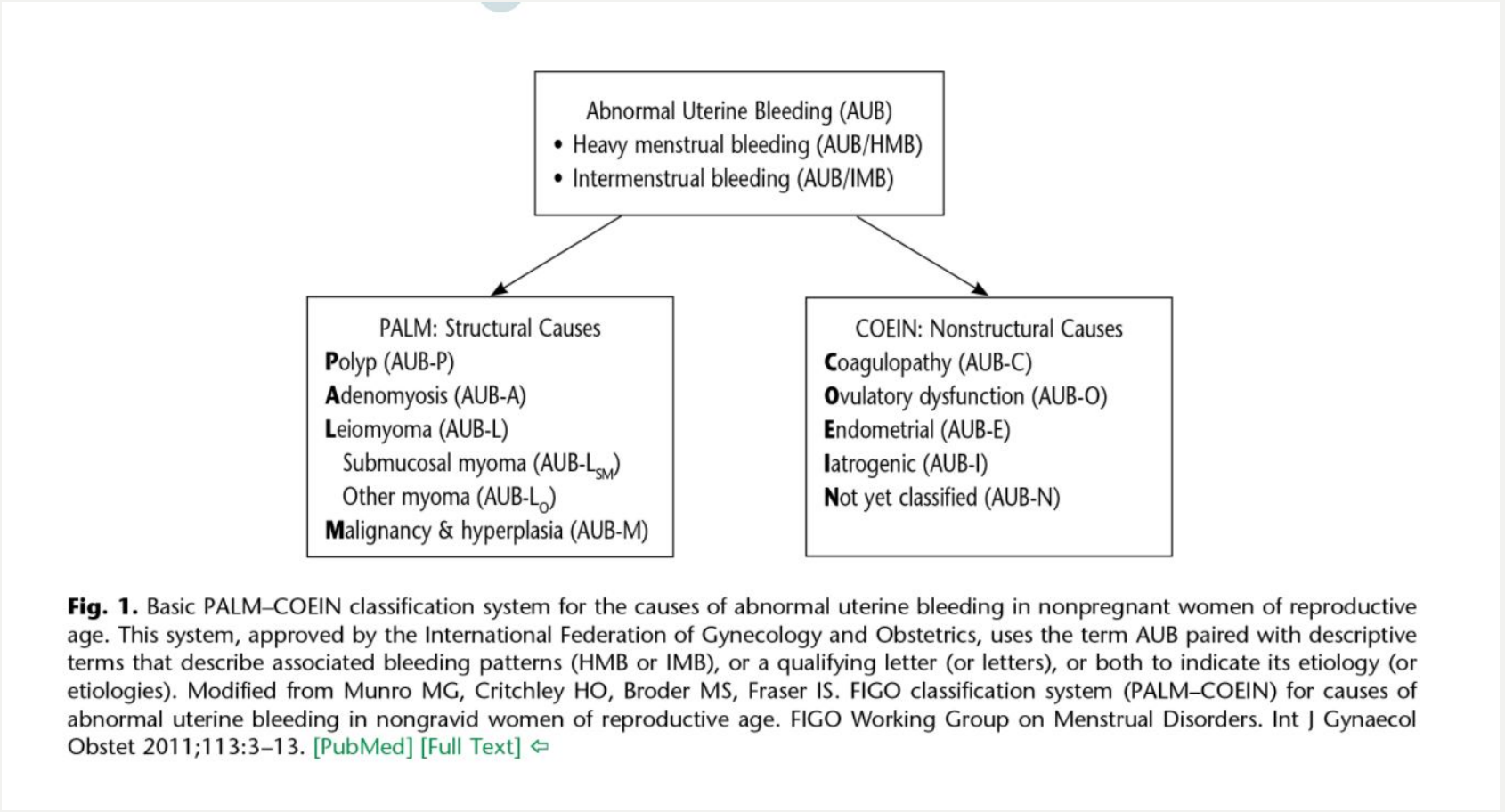

Fig. 1. Basic PALM–COEIN classification system for the causes of abnormal uterine bleeding in nonpregnant women of reproductive age. This system, approved by the International Federation of Gynecology and Obstetrics, uses the term AUB paired with descriptive terms that describe associated bleeding patterns (HMB or IMB), or a qualifying letter (or letters), or both to indicate its etiology (or etiologies). Modified from Munro MG, Critchley HO, Broder MS, Fraser IS. FIGO classification system (PALM–COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age. FIGO Working Group on Menstrual Disorders. Int J Gynaecol Obstet 2011;113:3–13. [PubMed] [Full Text] ⇦

Developed by FIGO, supported by ACOG

Causes of Heavy Menstrual Bleeding (HMB)

fibroids, polyps
adenomyosis
irregular ovulation (immature HPA, PCOS, perimenopause)**MOST COMMON AMONG ADOLESCENTS
bleeding disorders
copper IUD
thyroid dysfunction
endometrial cancer
Endometriosis
pregnancy (ectopic, miscarriage)
Sexually transmitted infections
Medications (Depot MPA, anti-coagulants)

**for adolescent women, most common causes are non-structural*

ACOG FAQ 193 "Heavy Menstrual Bleeding" June 2016
Haamid, et al. Heavy Menstrual Bleeding in Adolescents. Journal of Ped and Adolescent Gyn 2017: Vol 30, issue 3: 335-40

Screening Tools for bleeding disorders

- Pictorial Blood Assessment Chart (PBAC)
  - *Validated for adult women*
  - *Limited literature regarding adolescents*
- Questionnaire (one positive response warrants evaluation)
  - *Menses greater than 7 days and "flooding" or "gushing" sensation or bleeding through pad or tampon in 2 hours*
  - *History of anemia*
  - *Family history of bleeding disorder*
  - *History of bleeding disorder after hemostatic challenge (ie, tooth extraction, surgery, delivery)*

ACOG Committee Opinion 580. "Von Willebrand Disease in Women." December 2013.
Haamid, et al. Heavy Menstrual Bleeding in Adolescents. Journal of Ped and Adolescent Gyn 2017: Vol 30, issue 3: 335-40
James, Andra. "*Heavy menstrual bleeding: work-up and management.*" Hematology. 2016 Dec 2; 2016(1):236-242

Further Evaluation

Table 3
Focused History for Evaluation of HMB[55,62]

Bleeding pattern	Quantity, frequency of changing pads or tampons, presence of clots >1 inch, timing during menstrual cycle, effect on quality of life
Symptoms of anemia	Headache, palpitations, shortness of breath, dizziness, fatigue, pica
Sexual and reproductive history	Menstrual history, determination of gynecologic age, pregnancy history and outcomes, possibility of current pregnancy, contraceptives use, sexually transmitted infections, cervical screening
Associated symptoms	Fever, chills, increasing abdominal girth, pelvic pressure or pain, bowel or bladder dysfunction, vaginal discharge or odor
Symptoms associated with systemic cause of HMB	Obesity, PCOS, hypothyroidism, hyperprolactinemia, hypothalamic or adrenal disorder
Chronic medical illness	Inherited bleeding disorders (coagulopathy, blood dyscrasias, platelet function disorders), systemic lupus erythematosus or other connective tissue diseases, liver disease, renal disease, cardiovascular disease
Medications	Hormonal contraceptives, anticoagulants, SSRIs, antipsychotics, tamoxifen, herbals (ie, ginseng)
Family history	Coagulation or thromboembolic disorders, hormone-sensitive cancers

HMB, heavy menstrual bleeding; PCOS, polycystic ovarian syndrome; SSRI, selective serotonin reuptake inhibitor

Table 4
Focused Physical Examination for Evaluation of HMB[62]

Vital signs	Temperature, blood pressure, pulse, orthostatic vital signs, weight, BMI
Neck	Thyroid examination
Skin	Pallor, bruising, petechiae, hirsutism, acanthosis nigricans, acne, scarring
Abdomen	Distension, striae, palpable mass, tenderness, hepatomegaly
GU inspection	Vulva, vagina, urethra, anus for abnormalities (bleeding source, trauma, prolapse, cancer), sexual maturity rating
Speculum examination (if clinically indicated)	For further evaluation of vagina, cervix
Digital or bimanual examination (if clinically indicated)	Of uterus and adnexal structures for size, tenderness
Rectal examination (if clinically indicated)	If bleeding from anus or rectum is suspected

BMI, body mass index; GU, genitourinary; HMB, heavy menstrual bleeding

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Further evaluation

- Pregnancy test
- CBC, Ferritin, PT, aPTT, Thrombin time, Fibrinogen, von Willebrand panel
- *Chlamydia trachomatis, Neisseria gonorrhea*
  - *Vaginal, cervical, or urine*
- TSH
- Total testosterone, DHEAS, Androstenedione
- Determine appropriateness of pelvic exam
  - *Age/maturity/sexual experience*
- Pelvic ultrasound
  - *Transvaginal or transabdominal*
- Endometrial biopsy (>age 45 or unopposed estrogen)

Who needs treatment?

- Hemodynamically unstable, Anemic
- One third of women present to a physician with this complaint at some point…should they all be treated?
- Impact on well-being and quality of life
  - *Missed work or school, marginal school performance, involvement in social activities/sports, fatigue*
  - *Hospitalizations*
  - *HMB has psychological as well as physical morbidity*

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ACOG Practice Bulletin 110 “Noncontraceptive uses of hormonal contraceptives” January 2010

Acute treatment

- Determine hemodynamic stability
- Blood products
- Estrogen and progesterone
  - *Evaluate for contraindications to estrogen*
  - *IV vs po*
  - *Stabilize endometrium*
  - *Taper (combined or progesterone-only)*
    - E.g. 1 pill tid x 3-7 days, 1 pill bid x 3-7 days, then 1 pill qd

Haamid, et al. Heavy Menstrual Bleeding in Adolescents. Journal of Ped and Adolescent Gyn 2017: Vol 30, issue 3: 335-40

Acute treatment

- Antifibrinolytic agents
  - *Augment hormonal therapy*
- Iron therapy
- Failed Medical therapy
  - *Intrauterine balloon tamponade*
  - *Dilation and Curettage*
  - *Endometrial ablation*
  - *Hysterectomy*
  - ***consider need for fertility preservation*

Haamid, et al. Heavy Menstrual Bleeding in Adolescents. Journal of Ped and Adolescent Gyn 2017: Vol 30, issue 3: 335-40

Maintenance Treatment

Hormonal	Nonhormonal
Combined oral contraceptive pills	Tranexamic acid orally
Progesterone only pills	Aminocaproic acid orally
Combined patches	
Combined rings	
Progesterone injections	
Etonogestrel implant	
Levonorgestrel intrauterine device	

- ***Is patient sexually active and at risk for undesired pregnancy??*

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Goals of Treatment

- Reduce blood flow
- Improve anemia
- Regulate menstrual cycle
- IMPROVE QUALITY OF LIFE
- Minimize side effects
- Preserve fertility/allow for conception if desired

L.A.R.C (long-acting reversible contraceptives)

- LNG-IUD
  - *Reductions in blood loss of up to 86% after 3 months and up to 97% after 1 year*
  - *rates of amenorrhea vary between 20% and 80% at 1 year*
  - *Minimal systemic absorption*
  - *Superior to COCP in reducing menstrual blood flow in randomized trials*
- Etonorgestrel subdermal implant
  - *Amenorrhea 30-40% after 1 year*
- American Academy of Pediatrics policy statement on contraception for adolescents lists LARC as 1st line (2014)

ACOG Practice Bulletin 110 "Noncontraceptive uses of hormonal contraceptives" January 2010
AAP Policy statement "Contraception for adolescents" *Pediatrics, Vol 134:4, October 2014.*
James, Andra. "*Heavy menstrual bleeding: work-up and management.*" Hematology. 2016 Dec 2; 2016(1):236-242

LNG-IUD

Debunking Myths about IUD

- The American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, the Centers for Disease Control and Prevention (CDC), and the Society of Family Planning support use of LARC by adolescents
- Risk of Pelvic Inflammatory Disease highest in first 20 days after insertion
  - *overall absolute risk is 1.6 cases per 1000 woman–years of use*
  - *May decrease risk of PID with long term use*
- If STI is diagnosed after the IUD is in place, it may be treated without removing the IUD
- Does NOT increase risk of infertility

ACOG Committee opinion 735 “Adolescents and LARC” May 2018

IUD insertion

- Pre-medicating with Ibuprofen can decrease post-insertion pain
- Can offer insertion under IV sedation
- Irregular bleeding
  - *OCP overlap to regulate*
- FDA approved 6-7 years (Liletta vs Mirena)

Subdermal Implant (Nexplanon)

- Insertion with local anesthesia
- FDA approved for 3 years
- Higher rates of irregular bleeding
- Little published data on non-contraceptive benefits

Pills, Patch & Vaginal Ring

- Benefits with Perfect vs Typical use
- Assess risk for estrogen use
- Greater reduction in bleeding with reduced hormone-free interval, extended cycle or continuous use
- ****Combined pills suppress ovulation and reduce risk of hemorrhagic cyst formation**
  - *Progestin-only pills incompletely suppress ovulation*
- Monophasic pills easier to manipulate (taper, extended cycle, continuous)

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Duration of treatment in adolescents

- Patients with confirmed bleeding disorders
  - *Until pregnancy desired*
- Patients without bleeding disorders (or low suspicion)

Take home points

- Treat girls and women who suffer decreased well-being and quality of life due to HMB, even if negative for bleeding disorders
- Don’t be afraid of using LARC in adolescent patients

Thank You!