ABNORMAL UTERINE BLEEDING

DEFINITION

- Encompasses any significant deviation from normal frequency, regularity, heaviness (volume or amount) and duration of menstrual bleeding.

<table>
<thead>
<tr>
<th>Clinical dimensions of menstruation and menstrual cycle</th>
<th>Descriptive terms</th>
<th>Normal limits (5th to 95th percentiles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of menses (d)</td>
<td>Frequent</td>
<td>&lt;24</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>24–38</td>
</tr>
<tr>
<td></td>
<td>Infrequent</td>
<td>&gt;38</td>
</tr>
<tr>
<td>Regularity of menses, cycle-to-cycle variation over 12 mo (d)</td>
<td>Absent</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Regular</td>
<td>Variation ± 2–20 days</td>
</tr>
<tr>
<td></td>
<td>Irregular</td>
<td>Variation &gt;20 days</td>
</tr>
<tr>
<td>Duration of flow (d)</td>
<td>Prolonged</td>
<td>&gt;8.0</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.5–8.0</td>
</tr>
<tr>
<td></td>
<td>Shortened</td>
<td>&lt;4.5</td>
</tr>
<tr>
<td>Volume of monthly blood loss (mL)</td>
<td>Heavy</td>
<td>&gt;80</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>5–80</td>
</tr>
<tr>
<td></td>
<td>Light</td>
<td>&lt;5</td>
</tr>
</tbody>
</table>

HEAVY MENSTRUAL BLEEDING

DEFINITION

• Excessive menstrual blood loss which interferes with a woman’s physical, emotional, social and material quality of life, and which can occur alone or in combination with other symptoms.

• Replaces the term “menorrhagia”
ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

• Several hypothesis regarding adenomyosis and its association with AUB:

1. Increased endometrial surface
2. Altered PGE/PGF2α balance
3. Hampered myometrial contractility
4. Abnormal myometrial angiogenesis associated with fragile blood vessels
ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

• AUB secondary to leiomyomas may be due to:
  1. Mechanical distortion leading to increase in endometrial surface
  2. Bleeding from ulcerated endometrium overlying submucous myoma
  3. Myomas interfering with normal uterine hemostasis or compressing of the venous drainage at any site
  4. Dilatation of the venous plexuses draining the endometrium
ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

Primary classification: AUB -L

Secondary classification

Tertiary classification

<table>
<thead>
<tr>
<th>SM – Submucosal</th>
<th>0</th>
<th>Pedunculated intracavitary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>&lt;50% intramural</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>≥50% intramural</td>
</tr>
<tr>
<td>O – Other</td>
<td>3</td>
<td>Contacts endometrium; 100% intramural</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Intramural</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Subserosal ≥50% intramural</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Subserosal &lt;50% intramural</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Subserosal pedunculated</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Other (specify eg. cervical, parasitic)</td>
</tr>
</tbody>
</table>

Hybrid leiomyomas (impact both endometrium and serosa)

Two numbers are listed separated by a hyphen. By convention, the first refers to the relationship with the endometrium, while the second refers to the relationship to the serosa. One example is given below.

2-5 Submucosal and subserosal, each with less than half the diameter in the endometrial and peritoneal cavities, respectively

ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

• disorders of blood coagulation such as von Willebrand disease (most common), prothrombin deficiency, hemophilia, leukemia, severe sepsis, idiopathic thrombocytopenic purpura, and hypersplenism

• Other disorders that produce platelet deficiency, such as Chronic anticoagulation as a result of heparin, low-molecular-weight heparin, direct thrombin inhibitors, and direct factor Xa inhibitors
ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

AUB-O

• Anovulatory bleeding is most common during the extremes of reproductive life: in the first few years after menarche and during perimenopause.

• What are the causes of anovulation?
  1. extremes of reproductive life
  2. polycystic ovary syndrome (PCOS)
  3. hypothalamic dysfunction (related to weight loss, severe exercise, stress, or drug use)
  4. abnormalities of other nonreproductive hormone (thyroid hormone, prolactin, and cortisol)

ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

AUB-E

• heavy menstrual bleeding in the absence of other abnormalities are thought to have underlying disorders of the endometrium or are otherwise unclassified.

• In the past, this category has been called “ovulatory dysfunctional uterine bleeding.”

• Low PGF2α/PGE → increase menstrual blood loss

ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

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<th>Coagulopathy</th>
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<td>Adenomyosis</td>
<td>Ovulatory dysfunction</td>
</tr>
<tr>
<td>Leiomyoma</td>
<td>Endometrial</td>
</tr>
<tr>
<td>Malignancy &amp; hyperplasia</td>
<td>Iatrogenic</td>
</tr>
<tr>
<td>Other</td>
<td>Not yet classified</td>
</tr>
</tbody>
</table>

AUB-I

• abnormal bleeding resulting from medications such as *hormonal preparations*, including selective estrogen receptor modulators, and gonadotropin releasing hormone agonists and antagonists.

• combined and progesterone-only oral contraceptives may result in breakthrough bleeding (BTB).

• interactions between oral contraceptives and other medications, such as *antibiotics and anticonvulsants* may alter circulating levels of steroids, allowing follicular recruitment and increased endogenous levels of estrogen.

ABNORMAL UTERINE BLEEDING

“PALM-COEIN” CLASSIFICATION

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AUB-N

• Abnormal bleeding not classified in the previous categories is considered AUB-N.

• Examples of such conditions may include foreign bodies or trauma. Treatment is tailored to the specific cause.

• the acronym AUB is followed by the letters PALM-COEIN and a subscript 0 or 1 associated with each letter to indicate the absence or presence, respectively, of the abnormality.

• Example #1: A patient with abnormal bleeding due to a polyp:

\[ \text{AUB-P}_1\text{A}_0\text{L}_0\text{M}_0\text{-C}_0\text{O}_0\text{E}_0\text{I}_0\text{N}_0 \]

• Example #2: A patient with abnormal bleeding that is both irregular and heavy may have endometrial hyperplasia due to anovulation.

AUB- $P_0A_0L_0M_1- C_0O_1E_0I_0N_0$

HEAVY MENSTRUAL BLEEDING

DIAGNOSIS: HISTORY AND PE

• A thorough and methodical history is necessary in the diagnosis of AUB

• Complete physical examination strongly advised on all patients to identify any structural pathology or systemic disease as the etiology for AUB

Philippine Obstetrical and Gynecological Society (POGS) Clinical Practice Guidelines on Abnormal Uterine Bleeding 2017
HEAVY MENSTRUAL BLEEDING

DIAGNOSIS: BLOOD TESTS

1. Pregnancy should be excluded in women of reproductive age

2. An initial CBC with platelet count, PT, PTT are indicated for all adolescents with acute HMB including adult patients with positive screening history for bleeding disorder
3. Coagulation tests should be considered in women with HMB since menarche, and/or have personal or family history suggestive of coagulopathy

*a disorder of hemostasis in pxs with HMB may be diagnosed in 90% of cases based on the ff circumstances:

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<th>HMB since menarche</th>
</tr>
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<tbody>
<tr>
<td>One of the following:</td>
</tr>
<tr>
<td>Postpartum hemorrhage</td>
</tr>
<tr>
<td>surgical-related bleeding</td>
</tr>
<tr>
<td>bleeding associated with dental work</td>
</tr>
<tr>
<td>Two or more of the following</td>
</tr>
<tr>
<td>Bruising 1-2x/month</td>
</tr>
<tr>
<td>Epistaxis 1-2x/month</td>
</tr>
<tr>
<td>Frequent gum bleeding</td>
</tr>
<tr>
<td>FH of bleeding symptoms</td>
</tr>
</tbody>
</table>
When a woman presents with a complaint of abnormal bleeding, platelet count, prothrombin time, von Willebrand factor, and easy bruising and petechiae, a coagulation profile as well as PRL. If PCOS is suspected, androgen level measurement provides a valid indirect assessment of iron stores. Serum ferritin level is present.

Figure 26.6 Diagnostic approach to adults with abnormal uterine bleeding due to coagulopathy. (Data from Kouides PA, Conard J, Peyvandi F, et al. Hemostasis and menstruation: appropriate investigation for underlying disorders of hemostasis in women with excessive menstrual bleeding. *Fertil Steril.* 2005;84[5]:1345-1351.)

4. Female hormone testing (E2, progesterone, LH, FSH, ) should not be routinely done on women with HMB

5. Thyroid screening should only be obtained in the presence of signs and/or symptoms of thyroid disease.
HEAVY MENSTRUAL BLEEDING

DIAGNOSIS: IMAGING PROCEDURES

1. Ultrasound is the first line diagnostic tool for identifying structural abnormalities

2. Saline infusion sonography (SIS) is a useful tool in providing a more accurate evaluation of the uterus with intracavitary lesions.
HEAVY MENSTRUAL BLEEDING

DIAGNOSIS: OTHERS

1. Hysteroscopy should be performed when the ultrasound results are inconclusive (e.g., to determine the exact location of a fibroid or the exact nature of an abnormality), or when focal lesions are seen within the endometrium.

2. Outpatient endometrial biopsy should be the first line diagnostic tool to use when assessing women with HMB.
The following are indications for endometrial biopsy:

1. Age > 40
2. Risk factors for endometrial cancer
3. Failure of medical treatment
4. Breast cancer patients on tamoxifen with AUB
• In the absence of an organic cause for excessive uterine bleeding, it is preferable to use medical instead of surgical treatment, especially if the woman desires to retain her uterus for future childbearing or will be undergoing natural menopause within a short time.

• the type of treatment depends on whether it is used to stop an acute heavy bleeding (acute AUB) episode or is given to reduce the amount of MBL in subsequent menstrual cycles (Chronic AUB)

HEAVY MENSTRUAL BLEEDING
MEDICAL MANAGEMENT

Hormonal:
1. Levonorgestrel-releasing intrauterine system (LNG-IUS)
2. Combined oral contraceptives (COCs)
3. Progestins
4. Danazol and GnRH

Non-hormonal:
1. Anti-fibrinolytic agents
2. Nonsteroidal anti-inflammatory drugs (NSAIDs)
1. LNG-IUS is an effective treatment for HMB compared to placebo, other medications, endometrial ablation and hysterectomy.  **Strong, ++**

2. LNG-IUS and hysterectomy have similar patient satisfaction after treatment on 5-yr follow-up.  **Strong, ++++**

3. COC is comparable to mefenamic acid, danazol and naproxen sodium  **Strong, +**
4. Estradiol valerate/dienogest (E2V/DNG) is more effective than placebo in reducing HMB.  
   **Strong, +++**

5. Cyclic progestogen given for 21 days for ovulatory bleeding results in a significant reduction in blood loss, although it is not superior over other medical therapies (NSAIDs, tranexamic acid, danazol and LNG-IUS)  
   **Strong, +++**

6. Micronized progesterone is more effective than norethindrone in treating AUB  
   **Strong, ++++**
HEAVY MENSTRUAL BLEEDING
MEDICAL MANAGEMENT

7. Danazol and GnRH agonist will reduce HMB and may be used in cases of failed medical treatment, or when such treatments are contraindicated. **Strong, ++++**

8. Antifibrinolytic agents cause a greater reduction in HMB versus placebo or other medical treatments (NSAIDs, oral progestogens). **Strong, ++++**

9. NSAIDs reduce HMB when compared with placebo, but are less effective than tranexamic acid, danazol, or LNG-IUS. Limited evidence show no difference in efficacy between NSAIDs and oral progestogens or COCs. **Strong, ++**
HEAVY MENSTRUAL BLEEDING
SURGICAL MANAGEMENT

1. Dilatation and curettage is not recommended in the surgical management of HMB.  **Strong, +**

2. Endometrial ablation may be offered as an initial treatment for HMB in women who are not desirous of future pregnancy, in the absence of any structural or histologic abnormality.  **Strong, +++**

3. Women undergoing hysterectomy had better control of bleeding compared to oral medication or LNG-IUS. However it can cause serious complications and thus should not be used as first line treatment for HMB.  **Strong, ++++**

Consider quality and cost in AUB treatment

AUB continues to be a significant issue for many women. As women’s health care providers, it is important that we deliver care with high value (Quality ÷ Cost). Therefore, consider these takeaway points:

• The LNG-IUS consistently delivers high value by affecting both sides of this equation. We should use it more.
• Although we do not yet know what ulipristal acetate will cost in the United States, effective medical treatments usually affect both sides of the Quality ÷ Cost equation, and new medications on the horizon are worth knowing about.
• Last, efficiency with office-based hysteroscopy is also an opportunity to increase value by improving biopsy and visualization quality.
• Thank you.