Heavy or Irregular Menstrual Bleeding: When to Intervene?

Shannon K. Laughlin-Tommaso, MD MPH
Division of Minimally Invasive Gynecologic Surgery, Department of Obstetrics and Gynecology
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Disclosures

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- Royalties from UpToDate for uterine fibroids
- Will discuss off-label uses of hormonal medications
Objectives

- Review new nomenclature
- Discuss evaluation: what is abnormal?
- Offer treatment options individualized to patient concerns
What does “dysmenorrhea” mean?

1. Irregular menses
2. Heavy menses
3. Painful menses
4. Frequent menses
What does “dysmenorrhea” mean?

1. Irregular menses
2. Heavy menses
3. Painful menses
4. Frequent menses
What does “polymenorrhea” mean?

1. Irregular menses
2. Heavy menses
3. Painful menses
4. Frequent menses
What does “polymenorrhea” mean?

1. Irregular menses (oligomenorrhea)
2. Heavy menses (menorrhagia)
3. Painful menses (dysmenorrhea)
4. Frequent menses (polymenorrhea)
Nomenclature

Out
- Dysfunctional bleeding
- Menorrhagia
- Metrorrhagia
- Polymenorrhea
- -orrhea/orrhagia

In
- Abnormal uterine bleeding
- Heavy menstrual bleeding
- Intermenstrual bleeding
- Frequent menses

Munro, 2011.
Describe bleeding…

<table>
<thead>
<tr>
<th>Describe bleeding…</th>
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<td><strong>Regularity</strong></td>
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<td>Regularity</td>
<td>Regular (less than 20 days variation)</td>
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<td>Frequency</td>
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*changing protection more frequently than every 2 hours or any bleeding that interferes with activity/interrupts sleeping*
Is her bleeding abnormal?
Case 1

• 52 year old parous woman with menses every 21 days, except she skipped March and June. Bleeds for 4 days. On day 2, she changes her pad every 3 hours.
  • Started having hot flashes in February
Is this normal?

1. Yes
2. No
Is this normal?

1. Yes
2. No
Case 2

• 46 year old parous woman with menses every 30-35 days. Bleeds for 4-9 days. On her heaviest days, she changes her pad and tampon every hour. At night she bleeds onto her sheets.
Is this normal?

1. Yes
2. No
Is this normal?

1. Yes
2. No
Diagnosis for Case #2:

- Heavy, regular, prolonged menstrual bleeding
Instructions:
1. Indicate **THE NUMBER** (i.e., 1, 2, 3...) of sanitary pads and/or tampons that you used on each day of your last menstrual period.
2. Choose the picture that most closely represents the degree of staining of each pad or tampon used.
3. Indicate the presence and size of blood clots passed during your last menstrual period.
4. Indicate the occurrence of any menstrual accident during your last menstrual period (underwear, chair, or bed sheet soilage) in spite of protection.

**PICTORIAL BLOOD LOSS ASSESSMENT CHART FOR THE PREVIOUS MONTH**

<table>
<thead>
<tr>
<th>Amount of menstrual bleeding</th>
<th>Day 1</th>
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<th>Day 12</th>
<th>Total Tallies</th>
<th>Multiplying Factor</th>
<th>ROW TOTAL</th>
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**PBLAC Score (sum of Row Totals)**
**Instructions:**
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**PBLAC Score (sum of Row Totals)**: 207
Case 3

• 41 year old nulliparous woman with menses every 3 to 6 months that vary from very light to heavy with clots. Duration: 3-5 days
Is this normal?

1. Yes
2. No
Is this normal?

1. Yes
2. No
Diagnosis for Case #3:

• Irregular, occasionally heavy, infrequent menstrual bleeding
FIGO staging: the PALM-COEIN method

- Polyp
- Adenomyosis
- Leiomyoma (Fibroid)
- Malignancy (hyperplasia)
- Coagulopathy
- Ovulatory dysfunction
- Endometrial disorders (local endometrial hemostasis)
- Iatrogenic (exogenous steroids, IUDs)
- Not yet classified

Structural

Medical

Munro, 2011; Munro, 2011; Munro, 2011
Evaluation Simplified

- Pregnancy test
- TSH
- PCOS
- Iatrogenic

- Ultrasound

- Coagulopathy
- Infection

- Endometrial biopsy

Hormonal

Structural

Other

Endometrial
Other clues for hormone-associated bleeding

- Pregnancy →
- Fatigue, weight gain →
- Hirsutism/virilization →
- Headaches/vision changes →
- Hot flashes →

- Until age 56!
- Thyroid
- PCOS/androgen
- Hyperprolactinemia
- Premature Ovarian Failure or menopause
Diagnosis for Case #3:

- Irregular, occasionally heavy, infrequent menstrual bleeding

- Additional clues: Class 2 obesity, acne, hirsutism, and infertility → PCOS & at risk for hyperplasia
Hormonal causes: iatrogenic

Estrogen + = Progesterone
Hormonal Causes: Iatrogenic

- Progestin-only IUDs, implants, or pills can cause irregular bleeding
- Bleeding should be lighter
- Heavy, irregular bleeding should be evaluated
Evaluation Simplified

- Pregnancy test
- TSH
- PCOS
- Iatrogenic
- Coagulopathy
- Infection
- Ultrasound
- Endometrial biopsy
- Endometrial biopsy
Diagnosis for Case #2:

- Heavy, regular, prolonged menstrual bleeding
Fibroids
Adenomyosis
Evaluation Simplified

- Pregnancy test
- TSH
- PCOS
- Iatrogenic

- Ultrasound

Hormonal

Structural

Other

Endometrial

- Coagulopathy
- Infection

- Endometrial biopsy
When to biopsy?

- American College of Obstetrics & Gynecology:
  - Women 45+
  - Women 35+ risk factor
Risks for hyperplasia/endometrial cancer

- Age
- White race
- Obesity
- Nulliparity
- Infertility
- Late menopause
- Early menarche
- Unopposed estrogen
- Tamoxifen
- Diabetes mellitus
- Hypertension
- Lynch syndrome
- Irregular bleeding
- *Thickened endometrial stripe
- *Recurrent postmenopausal bleeding
Evaluation Simplified

- Pregnancy test
- TSH
- PCOS
- Iatrogenic

- Coagulopathy
- Infection

- Ultrasound

- Endometrial biopsy

Hormonal

Structural

Other

Endometrial
Coagulopathy

- 13% of heavy menstrual bleeding

**History:**
- Postpartum hemorrhage
- Bleeding with dental work
- Family history of bleeding symptoms

**Symptoms:**
- Bruising or epistaxis 1-2 x per month
- Frequent gum bleeding

ACOG practice bulletin, 2012
Coagulopathy

• von Willebrand disease
  • vWF-ristocetin cofactor activity
  • vWF antigen
  • Facto VIII
• PT, PTT, Platelets
• Medication review: warfarin, low-molecular weight heparin, rivaroxaban (and similar)

ACOG practice bulletin, 2012
Infection

• Chronic endometritis
  • Tender uterus
  • Cultures:
    • Mycoplasma/Ureaplasma
    • Endometrial biopsy

• Cervicitis
  • PCR: Gonorrhea/Chlamydia
Treatment options
Not all abnormal bleeding needs treatment

• **But it needs evaluation!**

• Reassurance

• Discuss anemia and quality of life

• Ovulatory dysfunction could put them at risk for hyperplasia/cancer
  • Generally want a bleeding episode at least every 3 months
Treat the abnormality

• Structural:
  • Polypectomy (in office)
  • Myomectomy

• Hyperplasia
  • Simple/Complex without atypia:
    • Progestin therapy with repeat biopsy

• Hyperplasia with atypia or Cancer:
  • Hysterectomy
Treat the abnormality

• Coagulopathy
  • DDAVP at start of menses
  • Anti-fibrinolytics:
    • Aminocaproic acid or tranexamic acid
    • Consider other heavy bleeding therapies (pills, IUD, ablation, etc.)

• Infection
  • Chronic endometritis: doxycycline 100mg twice daily x 10 days
Heavy bleeding is easier to treat

- Non-hormonal options
  - Treat during cycle
- Benefit of Contraception:
  - Combined estrogen-progestin
  - Progestin-only
- Surgical
  - Endometrial ablation
  - Hysterectomy
Treating only during the cycle

- **Tranexamic Acid:**
  - Reduces bleeding 26-54%\(^1\)
  - 650mg x 2 pills (1300 mg) three times a day
  - During the heavy days, up to 5 days
  - *Not always helpful for painful periods*
  - *VTE risk*

- **NSAIDs:**
  - Naproxen: 500mg first dose, 250mg every 8 hours
  - Mefanamic acid: 500 mg three times per day
  - Ibuprofen: 600 mg daily

Lukes et al, 2010
Providing contraception

• Combined estrogen/progestins:
  • *Not an option for women with hypertension, risk of thrombosis, or smokers over 35*
  • Great if planning a pregnancy in the near future
  • Regular Cycles, reduces bleeding 30-40%

• Levonorgestrel IUD:
  • 52mcg/day, lasts 5 years
  • Decreases bleeding 71-90%²

²Kaunitz et al, 2009
Not confirmed, but probably work:

- Continuous progestin-only pills
  - Irregular at first, but eventually lighter
  - Less reliable as contraceptive

- Etonorgestrel implant* & lower dose levonorgestrel IUDs:
  - Irregular at first, but eventually lighter
  - Highly reliable as contraceptive
  - *Great in women with uterine anomaly or structural abnormality
Surgical options

• *Must be done child-bearing

• Endometrial ablation\(^1\)
  • 5 second generation techniques
  • In office or with anesthesia
  • 80-90% reduction in bleeding
  • Requires reliable contraception

• Hysterectomy

\(^1\)ACOG Practice Bulletin, 2007
Irregular bleeding: the ovaries fault

• Suppress ovaries:
  • Combined estrogen-progestin provide most regular cycles
    • Problematic for women at risk
  • Implants/injection work too

• Force a period
  • Cyclic progestin to mimic the cycle
    • Medroxyprogesterone 10mg x 10 days (days 16-25)
Treating irregular bleeding

• Suppress the endometrium:
  • Levonorgestrel IUD

• Note: Endometrial ablation is **not** indicated for irregular bleeding
  • Puts women at risk for undiagnosed uterine cancer

• Hysterectomy
Thank you!

laughlintommaso.shannon@mayo.edu

Abnormal Uterine Bleeding Clinic:

**MDs:**
- Ola Famuyide
- Dan Breitkopf
- Matthew Hopkins
- Isabel Green
- Tatnai Burnett
- Shannon Laughlin-Tommaso

**NPs:**
- Lois McGuire
- Jenna Miller
- Lisa Ahlberg
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