Abnormal Uterine Bleeding (AUB)

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Objectives

- AUB History
- AUB Terminology, Work up and Diagnosis – PALM COEIN
- Individual Management

Disclosure

- I have nothing to disclose.

AUB History

William Cullen (late 1700s)

- Physics Professor at U of Edinburgh
- Translated medical texts from Latin into English
- Coined term **menorrhagia**- “to burst forth monthly”

Graves (1935)

- Coined term “dysfunctional uterine bleeding”

AUB History

Problems with terminology

- No standardization
- Difficulty documenting symptoms
- No consensus re: use of diagnostic techniques and medical/surgical therapies
- Inability to design and interpret basic clinical research
- Inability to conduct multi-center/multi-national clinical trials

FIGO

Menstrual Disorders Committee (MDC)

- Standing committee since 2012
- Published the FIGO AUB Classification System used today
- Published in International Journal of Gynecology and Obstetrics (IJGO)

"P.A.L.M C.O.E.I.N."

Obsolete Terminology (MDC)

Menorrhagia

Hypermenorrhea

Metrorrhagia

Menometrorrhagia

DUB

Polymenorrhea

NORMAL MENSTRUATION

Frequency: every 21 - 35 days

Regularity: no more than 7-9 days variance

Duration: no more than 8 days

Volume:

research → </= **80ml/cycle**

clinical → quality of life

ABNORMAL UTERINE BLEEDING

- **ANY** variation from normal menses +
- **Intermenstrual Bleeding**
- **Subtypes:**

ACUTE AUB

CHRONIC AUB

ACUTE AUB

- Reproductive-age, non-gravid women only
- Isolated episode
- Requires **immediate intervention** to prevent further blood loss

CHRONIC AUB

- Bleeding from **uterine body (corpus) only**
- Abnormal **frequency, duration** and/or **volume**
- Must be present for at least the **majority of the past 6 months**

MENSTRUAL FREQUENCY

- Normal = 21 - 35 days
- **Frequent Uterine Bleeding** = period occurs more often than every 21 days
- **Infrequent Uterine Bleeding** = period occurs less often than every 35 days
- **Secondary Amenorrhea** = regular cycles followed by no bleeding >/= 6 months

MENSTRUAL VOLUME

- Definition has 2 subtypes: **clinical and research-based**

CLINICAL MENSTRUAL VOLUME

- **Perception** of increased daily/monthly flow
- **Interferes** with patient's sense of well-being:
  - Physical
  - Social
  - Emotional
  - Material

MENSTRUAL VOLUME for RESEARCH

- Normal </= 80 ml/cycle
- Abnormal > 80 ml/cycle

INTERMENSTRUAL BLEEDING (IMB)

- AUB that occurs between well-defined cycles
- Impossible to apply to women with irregular or frequent menses

IMB - Uterine Causes

Polyps: endometrial / endocervical

Adenomyosis

Leiomyomas: mainly submucosal

Hyperplasia or Malignancy:

EIN - Endometrial Intraepithelial Neoplasia

Endometrial Adenocarcinoma

Sarcoma

Endocervical Adenocarcinoma

UTERINE IMB cont.

Ovulatory Disorders

Endometrial Disorders

- Disorders of local hemostasis
- Endometritis
- Other

UTERINE IMB cont.

Iatrogenic:

- Anticoagulants
- Gonadal Steroid Drugs or Precursors
- Devices (ie IUD)
- Other

UTERINE IMB cont.

Not Otherwise Classified:

- AV Malformations
- Cesarean Scar Bleeding
- Endometriosis
- Other

CYCLIC UTERINE IMB

MID-CYCLE - small amt of detectable bleeding arising from uterine cavity around mid-cycle

- Common (9% have detectable cause; 90% have occult)
- Physiologic - mid-cycle **drop** in E2

CYCLIC IMB cont.

PRE or POST-Menstrual - typically cyclic and light

FOLLICULAR ----------||----------LUTEAL

Endometriosis ---------->

Polyp ---------->

Structural Lesions ---------->

Luteal Phase Defect --->

ACYCLIC IMB

- No cyclic pattern
- Not predictable
- Typically **benign** (cervicitis, polyp etc)
- Can rarely indicate malignancy

NON-UTERINE IMB

- ENDOCERVICAL
  - Cervicitis - acute or chronic
  - Polyps
  - Malignancy
- VAGINA / VULVA
  - Trauma
  - Neoplasia
  - Infection

P.A.L.M. C.O.E.I.N

- Standardized way to classify AUB
- P.A.L.M. -

  structural entities

  Visible with *imaging* or with *histopathology*

P.A.L.M. C.O.E.I.N.

- **C.O.E.I.N. -**

  NOT structural entities

  You can’t “see” them

“P” is for Polyps

Definition: localized epithelial tumors
Endometrial or Endocervical

FIGO: classify presence/absence if SEEN
Histopathology does NOT count!

“A” is for Adenomyosis

Definition: presence of endometrial-type glands/stroma within **myometrium**

Diagnosis: traditionally by **histopath**(after hyst)

MRI + TVUS (pre-hyst) - new

Role in AUB: poorly understood and studies mixed

“L” is for Leiomyoma

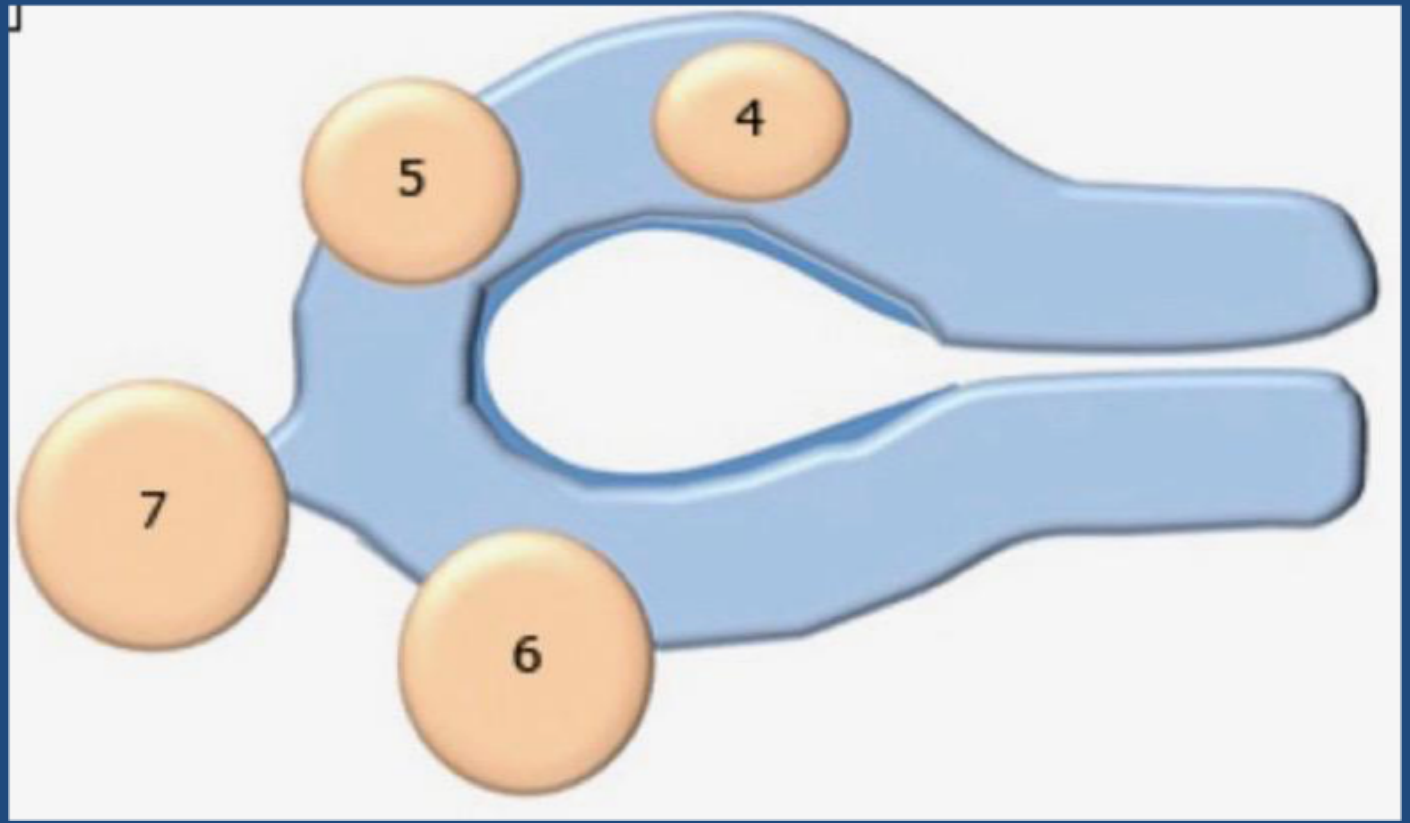
Definition: benign tumors of *smooth muscle*

Hierarchy of Classification:

Primary - presence or absence only

Secondary - submucosal vs. non-submucosal

Tertiary - most specific/categorizes ALL in relation to EM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“M” is for Malignancy

Definition: EM Hyperplasia w/ Atypia
EM Adenocarcinoma
EM Stromal Sarcoma
Leiomyosarcoma

Classification: **“AUB-M”** then FIGO staging

“C” is for Coagulopathy

Encompasses: spectrum of Systemic Hemostasis Disorders

24% women with HMB will have coagulopathy

von Willebrand’s is most common

How to pick up COAGULOPATHY

- **Start with a screening history.**
- **Positive history includes 1 of following:**

HMB since menarche

PPH

Surgical Bleeding

Dental Bleeding

COAGULOPATHY screen cont.

- **Two or more of following:**

  Bruising 1-2/month

  Epistaxis 1-2/month

  Bleeding gums frequent

  FH Bleeding symptoms

(+) Coagulopathy Screen

- **Consider further evaluation**
- **Hematology Consult**
- **Labs: vW factor + Ristocetin cofactor**

“O” is for Ovulatory Dys(fn)

Includes: **anovulation, oligo-ovulation, Luteal Phase Defects**

Presentation: Irregular Bleeding + HMB

An- and Oligo- ovulation

- Long-term exposure to E2
- Increased volume of proliferative EM

Luteal Phase Defect

1. Early Recruitment of Follicle
2. Follicle matures precociously
3. Huge increase in E2
4. Increased menstrual volume

Causes of Ov. Dysfunction

- Psychological stress
- Weight loss/gain
- Excessive exercise
- Medications (effect dopamine metabolism)
- Endocrine issues:

  Hypothalamus → Pituitary → Ovaries

“E” is for Endometrium

Presentation: regular cycles + HMB +/- IMB
with **no other** identifiable cause

Most common cause: **Primary Disorder of EM**
(ie - disorder of mechanism regulating LOCAL hemostasis of EM)

No available test

“I” is for Iatrogenic

Causes: Mechanical devices (IUDs)

Drugs:

Estrogens	Progestins	Androgens
SERMs	SPRMs	GnRH
Dopamine	Prolactin	Anti-coag.

“N” is for Not Otherwise Classified

- Poorly defined
- Extremely rare

Examples: A-V Malformations

C-section scar

(uterine isthmocele)

Treatment

- Treatment can vary based upon the cause of bleeding
- In many cases, a form of hormone therapy is recommended and there are many different options/forms
- Wide variety of procedural treatments available as well, and again, dependent on the etiology

References

- Williams Gynecology. 3rd edition. Ch 8, Abnormal Uterine Bleeding. 2016.
- Diagnosis of Abnormal Uterine Bleeding in Reproductive-Aged Women. ACOG Practice Bulletin #128, July 2006, Reaffirmed in 2016.
- Management of Abnormal Uterine Bleeding Associated with Ovulatory Dysfunction. ACOG Practice Bulletin, #136, July 2013, Reaffirmed in 2018.
- www.uptodate.com – Abnormal uterine bleeding in reproductive-aged women.

THANK YOU!

QUESTIONS?