Abnormal Uterine Bleeding

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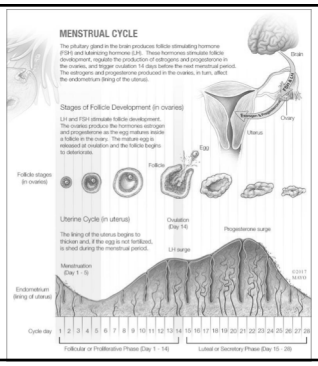
I have no disclosures.

Objectives

- Understand the definition of abnormal uterine bleeding
- Identify the standard evaluation of abnormal uterine bleeding
- Recognize the common causes of abnormal uterine bleeding
- Understand options for management of abnormal uterine bleeding

What is normal?

- Bleeding every 21-35 days
- Bleeding 1-7 days
- Bleeding less than 80cc per period
- Absence of irregularity in bleeding pattern



Abnormal Uterine Bleeding (AUB)

- Anything that falls outside of normal ranges of bleeding
  - Having a period more frequently than every 21 days
  - A period lasting longer than 7 days
  - Markedly heavy periods
  - Bleeding between periods/irregular pattern of bleeding
  - Bleeding less frequently than every 35 days

What is the Most Common Cause of AUB?

PREGNANCY

AUB

- Very common
  - 1/3 of all outpatient visits for GYNs
  - 70% all of GYN consults in perimenopausal/postmenopausal patients

Causes of AUB

- PALM-COEIN
  - **P**olyp
  - **A**denomyosis
  - **L**eiomyomata (fibroids)
  - **M**alignancy or hyperplasia
  - **C**oagulopathy
  - **O**vulatory dysfunction
  - **E**ndometrial
  - **I**atrogenic
  - **N**ot yet classified

AUB Evaluation

- Thorough Medical History
  - Menarche/Menopause
  - Former and current bleeding patterns
  - Associated symptoms
  - Past medical, surgical history
  - Medication use
- Physical Exam
  - Skin/hair pattern
  - Abdominal
  - Pelvic

AUB Evaluation

- Lab tests
  - HCG
  - CBC
  - TSH
  - FSH
  - Estradiol
  - Pap/HPV
  - GC/Chl
- Imaging
  - Pelvic ultrasound
  - Sonohysterogram
  - Pelvic MRI
- Tissue sampling
  - Endometrial sampling
  - Other

AUB Management

- Observation
- Medical Management
  - Hormonal contraception to suppress cycle/endometrial lining growth
  - Leuprolide injections
- Surgical Management
  - Polypectomy
  - Myomectomy
  - Endometrial ablation
  - Uterine fibroid embolization
  - MRI focused ultrasound
  - Hysterectomy

Endometrial **P**olyps

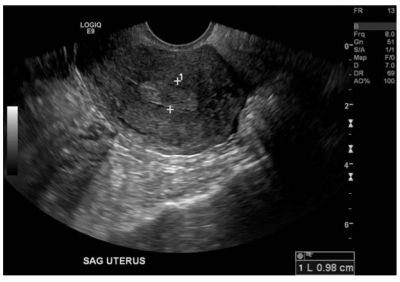
- Hyperplastic growth of endometrial cells – usually monoclonal
- Most are benign (95%)
- Increased risk with Tamoxifen use
- Unlikely to spontaneously regress

Endometrial **P**olyps

- Typical presentation
  - Intermenstrual spotting
  - Prolonged periods
  - Heavier periods

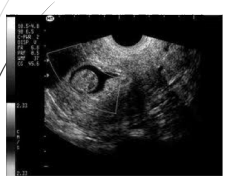
Endometrial **P**olyps Imaging

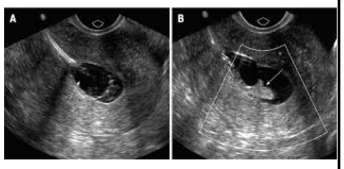
Ultrasound



Endometrial **P**olyps Imaging

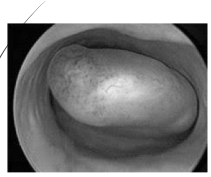
Sonohysterogram

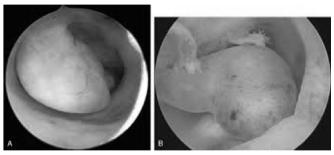




Endometrial **P**olyps Evaluation and Management

Hysteroscopy





Adenomyosis

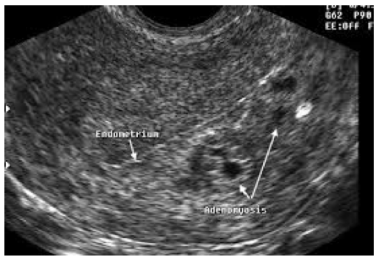
- Pathologic diagnosis
  - Can only be confirmed post-hysterectomy
  - Imaging findings and history can suggest adenomyosis
- Endometrial glands/stroma are found within the myometrium
- Most commonly found in mid to late reproductive age women
- Estimated incidence is 20-35% of reproductive age women

Adenomyosis

- Typical Presentation
  - Heavier/longer periods
  - More painful periods
- Exam findings
  - Enlarged "globular" uterus
  - Uterus with soft/spongy texture

Adenomyosis Imaging

Ultrasound



Adenomyosis Management

- Medical Management
  - Hormonal contraception to suppress cycle/development of lining
    - OCPs, ring, patch, progestin IUD, progestin implant, and progestin injection
- Surgical Management
  - Hysterectomy
  - Endometrial ablation

Leiomyomata (Uterine Fibroids)

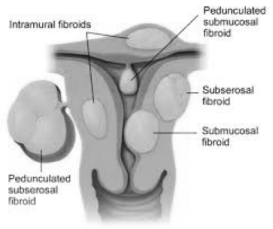
- Most common pelvic tumor
- Can be found at any age
- Can be asymptomatic
- Monoclonal tumor of smooth muscle

Leiomyomata

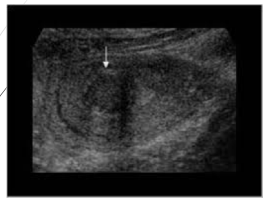
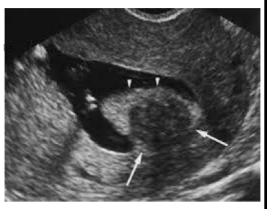
- Typical Presentation
  - Heavier/longer periods
  - More painful periods
  - Mass effect symptoms
  - Fertility interference
- Exam findings
  - Enlarged uterus
  - Irregular surface
  - Isolated mass
  - Normal exam

Leiomyomata

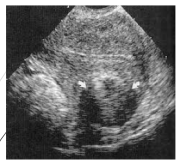
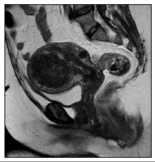
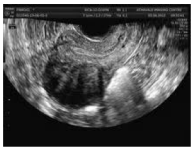
Locations
- Submucosal
- Intramural
- Subserosal



Leiomyomata Imaging

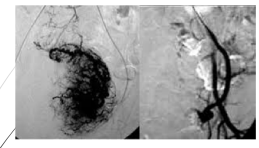
Leiomyomata Imaging

Leiomyomata Management

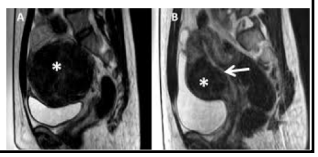
- Medical management
  - Best for intramural fibroids
  - OCPs, patch, ring, progestin IUD, progestin implant, progestin injection
  - Leuprolide
- Surgical management
  - UFE
  - MRI focused ultrasound
  - Myomectomy
  - Hysterectomy

Leiomyomata Management



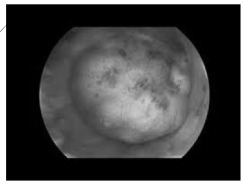
UFE

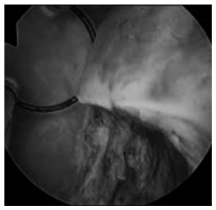
MRI Focused US



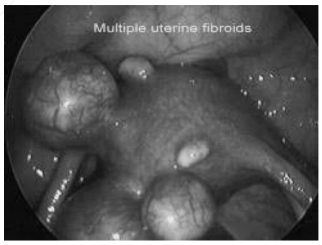
Leiomyomata Management

Hysteroscopic Myomectomy





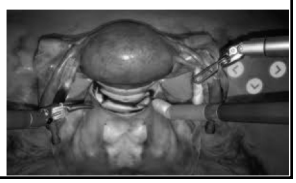
Leiomyomata Management



Myomectomy

Leiomyomata Management

Abdominal hysterectomy



Robotic assisted total laparoscopic hysterectomy

Endometrial Malignancy and Hyperplasia

- Cancer
  - Endometrial CA the most common GYN malignancy in the US
  - Most are diagnosed at early stages
  - Most are diagnosed in the postmenopausal period
  - Risk factors for premenopausal diagnosis
    - Obesity
    - Prolonged/recurrent anovulation
    - Early menarche
    - Nuliparity
    - Genetic mutations

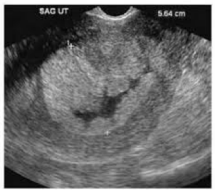
Endometrial Malignancy and Hyperplasia

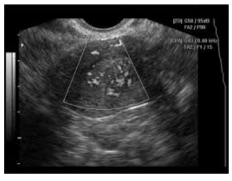
- Hyperplasia
  - Proliferation of glandular tissue
  - Same risk factors as for malignancy
  - 2014 WHO classification
    - Without atypia
    - With atypia
      - Malignancy can be found concurrent
      - Increased risk of progression to malignancy

Endometrial Malignancy and Hyperplasia

- Typical presentation
  - Prolonged, heavy vaginal bleeding
  - Postmenopausal bleeding
- Exam findings
  - Usually normal
  - Uterus may be enlarged
- Diagnosis is made by tissue sampling

Endometrial Malignancy Imaging





Coagulapthy

- Need high suspicion
  - Presentation
    - Adolescent with heavy/long periods
    - Frequent epistaxis
    - Easy bruising
  - Exam findings
    - Bruising
    - Petechiae
- Bleeding disorders
  - Von Willebrand Disease
  - Platelet disorders
  - Factor deficiencies
  - Fibrinogen deficiencies

Ovulatory Dysfunction

- Changes or interference in ovarian response to reproductive hormones
  - PCOS
  - Perimenopausal
  - Menarchal immaturity
  - Endocrine
    - Thyroid
    - Prolactin
    - Premature Ovarian Failure
  - Genetic
    - Turner's Syndrome
    - Premature Ovarian Failure
  - Other

Ovulatory Dysfunction

- Typical Presentation
  - Irregular periods
  - Episodes of prolonged bleeding
- Exam Findings
  - Normal
  - Thyromegaly
  - Acanthosis Nigricans
  - Hirsutism
  - Small stature

Ovulatory Dysfunction

Endometrial

- Non-structural
- Diagnosis of exclusion
- Thought to be secondary to changes in hemostatic factors at the endometrial level
- Usually associated with heavy cyclic bleeding
  - But can be associated with intermenstrual/irregular bleeding

Iatrogenic

- Hormonal contraception
  - The most common iatrogenic cause of AUB
  - Breakthrough bleeding is the most common side effect of hormonal contraception
- Anticoagulants
  - Disruption of the clotting cascade
  - Can often be found with another cause of AUB
- Antidepressants/Antipsychotics
  - Disruption of dopamine metabolism with subsequent effects on prolactin

Not Yet Classified

- Etiologies not yet identified
- Rare/infrequent etiologies
  - AV malformations
  - Chronic endometritis

Case #1

- 18y/o G0 presents with complaints of heavy periods since menarche at age 14. Cycles are q 28 days x 7 days. CD#2-4 are the heaviest and on these days she doubles up with a tampon and pad and changes each every hour. She has episodes of soaking through her clothing. She denies significant cramping with her period. She has no other symptoms or complaints. She has had no prior evaluation of her symptoms. She was told she was anemic one year ago o/w her medical, surgical, family and social histories are unremarkable.
- Exam is unremarkable.

Case #1

- Differential
  - Coagulopathy
  - Ovarian dysfunction
  - Endometrial
  - Leiomyoma
  - Not yet Classified

Case #1

- Evaluation
  - Urine HCG
  - TSH, prolactin
  - CBC
  - Coag panel, Ristocetin Co-Factor A/Von Willebrand panel
- Diagnosis
  - Von Willebrand's deficiency
- Management
  - Hormonal contraception
  - Desmopressin for surgical procedures

Case #2

- 44y/o G3P3003 presents with c/o progressively heavy periods for the last 2 years. Her cycle is regular q 28 days x 5 days. CD#1-4 are the heaviest and she wears a super pad that she changes q 30 minutes. She has episodes of soaking through her clothing and of passing large clots. She has had associated increased cramping with her periods as well. She has LH/dizziness and fatigue during her period. Her medical history is significant for a DVT during her first pregnancy and type II DM; she has had three prior C/S with a BTL – no other surgeries. The remainder of her history is unremarkable.
- Exam
  - BMI 55
  - Uterine size is upper limits of normal and boggy with mild TTP

Case #2

- Differential
  - Polyp
  - Leiomyoma
  - Adenomyosis
  - Malignancy/hyperplasia
  - Ovulatory dysfunction
  - Endometrial
  - Not yet Classified

Case #2

- Evaluation
  - CBC, TSH
  - Pelvic Ultrasound
  - Endometrial sampling
- Diagnosis
  - Suspected adenomyosis

Case #2

- Management
  - Hormonal contraception
    - Not a candidate for OCPs, ring, patch, or progestin implant
  - Endometrial ablation
  - Hysterectomy

Case #3

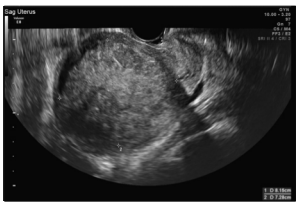
- 30y/o G0 presents with complaints of heavy periods and pelvic pressure x 18 months. Cycle is q 28 days x 5 days with heavy flow all 5 days. She changes a pad and tampon q 60 min. She notes constant pelvic pressure which worsens during her period. She has no other complaints or symptoms. Her medical, surgical, family, and social history is unremarkable. Of note, patient and her SO plan to start trying to conceive in 6 months.
- Exam
  - Mass palpable to just below her umbilicus
  - Pelvic exam reveals an enlarged uterus about 14 week size with a large mass extending from the fundal aspect of the uterus.

Case #3

- Differential
  - Leiomyoma
  - Ovarian cyst
  - Pelvic mass

Case #3

- Evaluation
  - CBC
  - Pelvic Ultrasound



Case #3

- Diagnosis
  - Large intramural fibroid
- Management
  - Myomectomy
  - Leuprolide
  - Observation

QUESTIONS?????