Presentation

- A 54 year old G2P2 African American female presented to her OB/GYN with postmenopausal bleeding that began within the past month.
- Last menstrual period about one year ago.

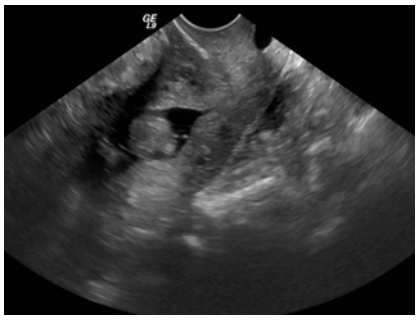
History

- PMH:
  - DM
  - Hx of PE -> secondary to UE Thrombosis (on Coumadin x 3 years)
  - HTN
- PFH:
  - Maternal Grandmother - Ovarian CA
  - Father – "died of burst heart blood vessel"; age unknown

History

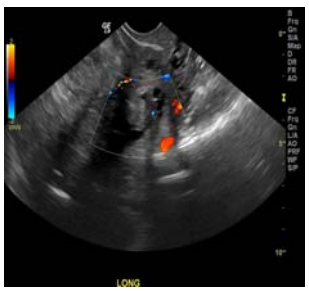
- On physical exam per documentation:
  - Estimated that pt's uterus was roughly 19 weeks (or just below the umbilicus)
- Images were obtained as an outpatient.

Radiological Findings ….
What do we see?! What Modality?

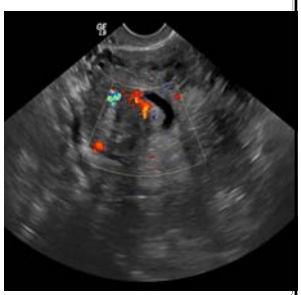


Radiologic Findings continued ….
What is unique?

US Image #1



US Image #2



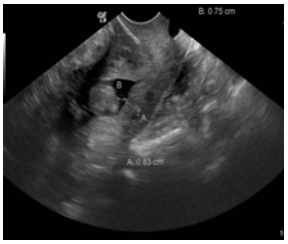
Differential Diagnosis

- Focal Hyperplasia (9.8%)
  - A focal area of proliferation of the endometrial cell lining
  - Typically caused by exposures to high levels of **estrogen** with **insufficient levels of progesterone** to balance
  - Endometrium is thickened, not homogeneous. Small cysts are commonly seen.
  - Only bx can differentiate between hyperplasia and carcinoma
- Submucosal Leiomyoma (Uterine Fibroid)
  - Benign tumor that originates from the muscular layer (myometrium) of the uterus
  - Etiology not clearly understood. Estrogen/progesterone exposure ? Genetic predisposition?
  - Typically present as an enlarged or abnormal contoured uterus.
  - Color Flow shows vascular supply that's continuous with the myometrium
  - "**Venetian Blind Sign**" – dark, linear shadows (in the fibroid) caused by increased absorption of sound by fibrous tissue in the fibroid

- Endometrial Carcinoma (10%)
  - Typically a diffuse process, however early cases can be focal and may appear as a polypoid mass.
  - **Endometrial thickening > 15 mm** is strongly associated with carcinoma
- Uterine Polyp (12%)
  - They are hyperplastic overgrowths of endometrial glands and stroma that form a projection from the surface of the endometrium (lining of the uterus).
  - Focal, echogenic polypoid mass in the endometrium or diffuse endometrial thickening
  - Single feeding vessel
- Hematometra (2%)
  - Collection of blood in the uterus

Final Radiologic Report

- Heterogenous 1.8 cm lesion within the endometrial canal with a thickened endometrial stripe measuring 16 mm.
- These findings likely relate to a polyp.
- However, because the pt had an underlying fibroid disease, we could not rule out fibroids.



Key Finding: Single Vessel leading to lesion.

Sonohystogram: The Basics Continued ….

- Advantages:
  - Easy to perform
  - Fast
  - Minimally Invasive
  - Rare Complications
- Cons:
  - Really, none.

Putting it all together: Abnormal Post-Menopausal Bleeding …

- 5% of Gyn visits
- Most worrisome on differential list?
  - Endometrial CA (approx 10% but can range up to 25% depending on risk factors)
- MC = atrophy of vaginal mucosa or endometrium
- Interesting Tidbit:
  - Early post-menopausal years (avg age = 51 yrs for onset) most likely differential:
    - Endometrial hyperplasia
    - Polyps
    - Submucosal Fibroids

Abnormal Post-Menopausal Bleeding … …Work Up 101

- Step #1: **Get a good H & P!**
  - When did bleeding start? Any precipitating event?
  - Nature of bleed? Pattern, duration, post-coital, quantity?
  - Associated signs & symptoms – pain, fever, bladder & bowel fxn changes?
  - PMH, medications (hormones, anticoagulants)?
  - Family Hx of breast, endometrial cancer?
- Step #2: **Endometrial Bx or Transvaginal US = good initial test**
  - Endometrial Bx: good initial test, high sensitivity, low complication rate, low cost
    - NOT GOOD FOR DX STRUCUTURAL PROBLEMS
    - Good because it gets tissue – definitive dx
  - Transvaginal US: can reasonably exclude CA if the endometrium is thin & homogenous …. Ie, <5 mm & homogeneous)
  - However, If intrauterine pathology is suspected sonohystogram is recommended.
  - May also do an MRI, or hysteroscopy to evaluate the uterus
- Step #3:Pending on previous results **observation**, **medical** or **surgical management** may be indicated.

Important Tidbits: Uterine Polyps

- Occur in roughly 12% of PMB
- MC between ages 30-60 years
- Common in pts on some type of hormone replacement therapy (ie: Tamoxifen. ER – on Breast, ER + on Endometrial tissue)
- Location:
  - Most common origin **cornual** and **fundus**, rarely prolapsing through exo-cervix
- Size: 1 mm to a 2 cms
- Flat or Pedunculated
- Polyp v Leiomyoma:
  - Polyps < 2 cm & single feeding vessel
  - Leiomyoma > 2 cm & multiple feeding vessels & more likely to have acoustic shadows

References

- Brant & Helms. Fundamentals of Diagnostic Radiology. Fourth Edition, Volume III. Pages 886-890.
- Stat Dx: "Uterine Polyps."
- Up to Date. "Abnormal Uterine Bleeding"
- Up to Date. "Sonohystogram."
- Up to Date. "Uterine Polyps."