

Post Menopausal Bleeding *and the EMBs that follow*

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What we're going to do

- ❁ Review implications of PMB
- ❁ Discuss risk factors for endometrial cancer
- ❁ Review management guidelines for PMB
- ❁ Discuss endometrial biopsy procedure

PMB: Why do we care?

- ❁ Cancer of the endometrium is the most common gynecologic cancer in the United States (61,380 estimated new cases of uterine cancer in 2017 and 10,920 deaths; 61,880 estimated new cases and 12,160 estimated deaths in 2019 per ACS)
- ❁ 92% of uterine cancer occurs in the endometrium
- ❁ **90% of endometrial cancers present with PMB**
- ❁ Approximately 4-11% of PM women experience PMB (incidence decreases with time from menopause)
- ❁ Approximately 10% (6-19%) of women who experience PMB will have endometrial cancer

Causes of PMB

- ❁ Vaginal/endometrial atrophy (>30%)
- ❁ Endometrial Polyp
- ❁ Proliferative (adipose tissue?)/secretory
- ❁ Cancer (>6%)
- ❁ Fibroid
- ❁ Hyperplasia without atypia
- ❁ Atypical hyperplasia
- ❁ Others (post-radiation, supplements, infection)

Atrophy

- ❁ 2/2 hypoestrogenism of endometrium and vagina
- ❁ Intracavitary friction
- ❁ Possible chronic inflammation

Risk factors for endometrial cancer?

Endometrial Cancer

- ❁ Age (increased risk with time since menopause)
- ❁ Excess estrogen exposure (chronic anovulation from thyroid d/o, elevated prolactin; obesity, use of unopposed estrogen, Tamoxifen, early menarche/late menopause)
- ❁ PCOS (most common endocrine d/o associated with anovulation)
- ❁ FHx of endometrial cancer

Associated Factors with Endometrial Cancer

- ❁ Type 2 DM
- ❁ Atypical glandular cells on cervical cytology
- ❁ Nulliparity and infertility
- ❁ HTN
- ❁ H/o breast cancer

Protective Factors for Endometrial Cancer

- ❁ Hormonal contraceptives (likely from progesterone suppressing endometrial proliferation)
- ❁ Increasing age at last birth – yay for geriatric pregnancies!
- ❁ Breastfeeding
- ❁ Cigarette smoking (increased hepatic metabolism of estrogens?)
- ❁ Increased physical activity
- ❁ Coffee
- ❁ Tea (green)

Case 1:

- ❁ 54 yo F G2P1 with h/o obesity (BMI 32), type 2 DM well controlled on metformin 1 gm BID, HTN, and HL presents for her WWE. RHM is all UTD. When discussing her gyn hx she states her LMP was early 2018 but she had an episode of spotting x 5 days a few months ago.
- ❁ What do you recommend?

Case 2:

- ❁ 66yo F G1P0 with h/o osteoporosis on alendronate and vitamin D supplements presents for her WWE and reports an episode of VB a few months prior.
- ❁ What do you recommend?

Evaluating PMB: Transvaginal US

- ❁ *TV US “usually is sufficient for an initial evaluation of PMB if the US images reveal a thin endometrial echo (less than or equal to 4 mm), given that an endometrial thickness of 4 mm or less has a >99% negative predictive value for endometrial cancer.”*
- ❁ Reasonable alternative to endometrial sampling as a first approach in evaluating an initial episode of PMB but either is acceptable (both are not required)

Evaluating PMB: TV US

- ❁ TV US should only be used in women whose prior probability of cancer or hyperplasia are low enough that no further testing would be required after normal US
- ❁ EMB should be the first-line test for women with PMB at higher risk of endometrial cancer and endometrial intraepithelial neoplasia, based on clinical risk factors or clinical presentation

TV US

- ❁ Endometrial thickness = maximum AP thickness of endometrial echo on a long-axis TV view of uterus

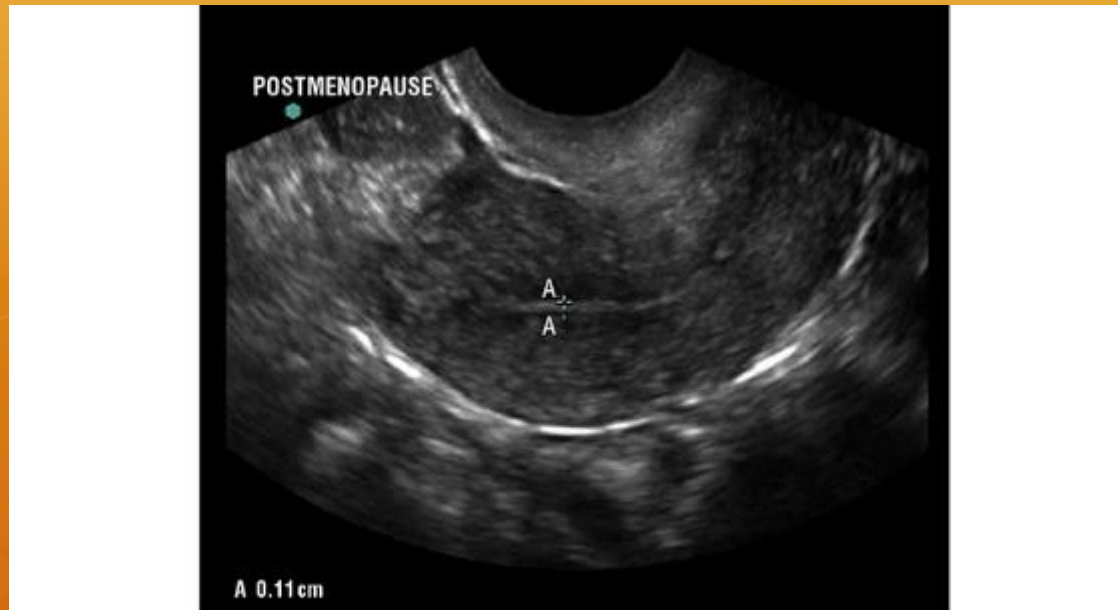


Figure 1. Measurement of endometrial thickness. The endometrial thickness measured at its thickest portion as the distance between the echogenic borders (calipers) perpendicular to the midline longitudinal plane of the uterus. ↔

Case 3:

- ❁ A 71yo F G3P2, BMI 24.5, with h/o lumbar stenosis, HTN, HL, osteoporosis presents for f/u of chronic abdominal pain. Her work up has included normal blood work, an abdominal US that showed a likely hemangioma of the liver but was otherwise unremarkable, and a pelvic US that an endometrial stripe of 6mm. The patient denies any h/o VB since she went through menopause at 54yo.
- ❁ What do you recommend?

- ❁ ***The incidental finding of an endometrial stripe >4mm in a postmenopausal women without bleeding should not routinely prompt evaluation***
- ❁ An individualized assessment based on patient characteristics and risk factors is appropriate

Case 4:

- ❁ A 65yo G0P0 woman with h/o diet-controlled DM type 2, HTN, and obesity now down to overweight 2/2 intentional weight loss with lifestyle changes presents to establish care. She is very concerned about staying healthy and wants to perform “all the tests and cancer screenings possible” including for uterine cancer because an aunt had been diagnosed with some gynecological cancer at an unknown age.
- ❁ What do you recommend?

Endometrial Cancer Screening:

- ✿ There is none for the asymptomatic patient

Case 5:

- ❁ 71yo G4P4 F presents to procedure clinic for an EMB after one episode of PMB. You performed 2 passes but were not able to obtain much tissue, and the results come back as “insufficient”. You were planning to call her to inform her of her results.
- ❁ What do you recommend?

Case 5:

- ❁ *TV US can be useful in the triage of women in whom office endometrial sampling was performed but tissue was insufficient for diagnosis and bleeding has stopped.*

Case 6:

- ❁ 54 yo F G2P1 with h/o obesity (BMI 32), type 2 DM well controlled on metformin 1 gm BID, HTN, and HL presents for her WWE. RHM is all UTD. When discussing her gyn hx she states her LMP was early 2018 but she had an episode of spotting x 5 days a few months ago.
- ❁ A TV US shows an endometrial stripe of 8 mm.
- ❁ What do you recommend now?

Case 6:

- ❁ *Failure to adequately identify a thin, distinct endometrial echo in a postmenopausal woman with bleeding should trigger sonohysterography, office hysteroscopy, or endometrial sampling.*

Case 7:

- ❁ 66yo F G1P0 with h/o osteoporosis on alendronate and vitamin D supplements presents for f/u of her TV US results after she saw you for her WVE a month ago and reported an episode of PMB a few months prior to that appt.
- ❁ Her TV shows an endometrial stripe of 3 mm.
- ❁ She endorses a second episode of PMB since her last appt with you.
- ❁ What do you recommend?

Case 7:

- ❁ *Repeated episodes of PMB and ongoing PMB require histologic evaluation even in women with an apparent thin endometrial echo.*
- ❁ Outpatient EMBs are the preferred method of sampling given ease of performance.

Case 7:

- ❁ You get this patient's EMB results which is negative for endometrial hyperplasia or malignancy. However, when you call her to inform her of the results 2 weeks after the procedure, she endorses continued, persistent VB since the EMB.
- ❁ What do you recommend?

Case 7:

- ❁ *If EMB does not reveal endometrial hyperplasia or malignancy, further testing (i.e., hysteroscopy with D&C) is warranted in the evaluation of women with persistent or recurrent PMB.*
- ❁ Rare cases of endometrial carcinoma (particularly type II) can present with endometrial thickness of <3mm

Limitations to TV US

- ✿ Axial uterus
- ✿ Obesity
- ✿ Coexisting myomas
- ✿ Adenomyosis
- ✿ Previous uterine surgery

What's after an EMB/TV US?

- ✿ Sonohysterography
- ✿ Hysteroscopy

The EMB

- ❁ Things you need:
- ❁ Betadine
- ❁ Cotton swabs
- ❁ Speculum, lube
- ❁ Pipelle
- ❁ Os finder/dilator
- ❁ Tenaculum
- ❁ Formalin
- ❁ Monsels or other

The End

🌸 Questions, thoughts, comments?

References

- ❁ The Role of Transvaginal Ultrasonography in Evaluating the Endometrium of Women With Postmenopausal Bleeding ACOG Committee Opinion Number 734, May 2018
- ❁ Goodman, A. (2018) Postmenopausal uterine bleeding. Chakrabarti, A. (Ed.), *UpToDate*. Retrieved July 1, 2018, from https://www.uptodate.com/contents/postmenopausal-uterine-bleeding?search=postmenopausal&20bleeding&source=search_result&selectedTitle=1~85&usage_type=default&display_rank=1
- ❁ Feldman, S. Overview of the evaluation of the endometrium for malignant or premalignant disease. Chakrabarti, A. (Ed.), *UpToDate*. Retrieved July 1, 2018, from https://www.uptodate.com/contents/overview-of-the-evaluation-of-the-endometrium-for-malignant-or-premalignant-disease?search=postmenopausal%20bleeding&source=search_result&selectedTitle=2~85&usage_type=default&display_rank=2

Thank You!