An Overview of Postmenopausal Bleeding

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INTRODUCTION

Postmenopausal bleeding (PMB) refers to an episode of bleeding in a woman who had her final menstrual period 12 or more months ago. It occurs in up to 10% in women over 55 years of age.[1] The most common causes of uterine bleeding in postmenopausal (PM) women are benign and include vaginal or endometrial atrophy, cervical polyps, and submucosal fibroids. However, it is estimated that the prevalence of endometrial carcinoma is about 10% in women with PMB[2] and vaginal bleeding is the presenting symptom in 90% of women with endometrial cancer.[3]

INITIAL EVALUATION

A detailed history should be obtained to identify the most likely etiology of the bleeding. The history should include associated symptoms such as pain, fever, dyspareunia, urinary symptoms, family history of gynecologic cancer, and personal risk for endometrial cancer (see Table 1).

A complete physical examination should be performed to evaluate for the presence of underlying systemic illness. During pelvic exam, thoroughly inspect the external and internal female genital tract, evaluating for any polyps, atrophy, suspicious lesions, infections, or lacerations. Palpate the size, contour, and tenderness of the uterus.[5,6] Cervical cytology screening should also be done as part of evaluation of bleeding.[4]

Table 1: Risk Factors for Endometrial Cancer [4]

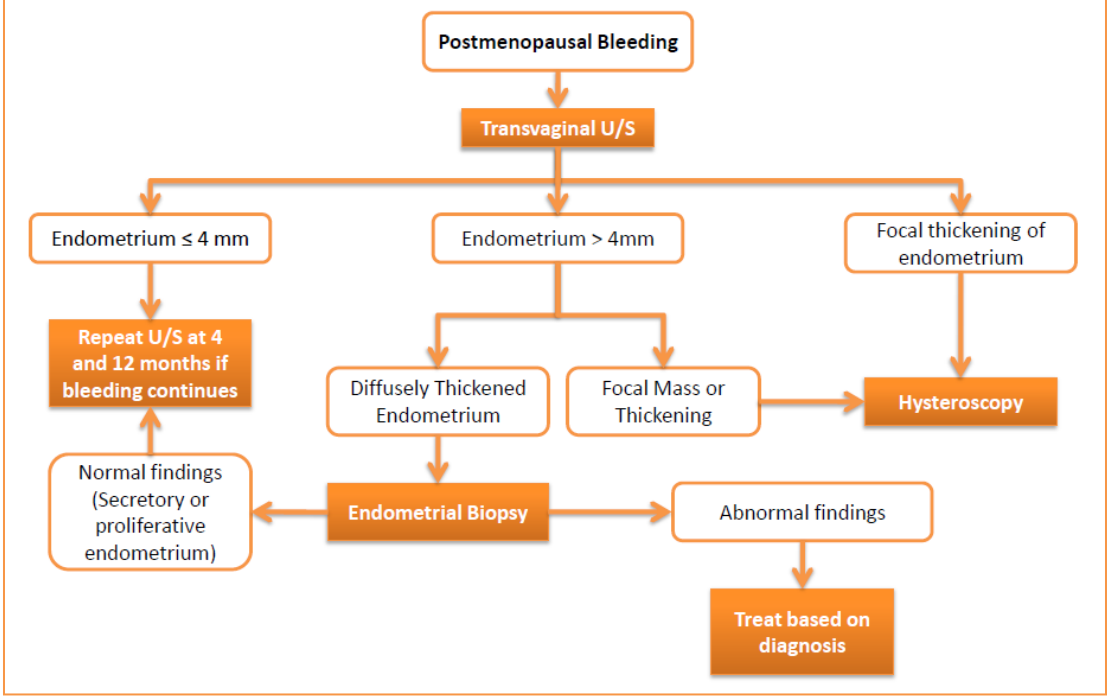
Increasing age
Unopposed estrogen therapy
Late menopause (after age 55)
Nulliparity
Chronic anovulation (polycystic ovarian syndrome)
Obesity
Diabetes mellitus
Hereditary nonpolyposis colorectal cancer
Tamoxifen therapy
Early menarche
Estrogen secreting tumor
Family history of endometrial, ovarian, breast, or colon cancer

DIAGNOSTIC EVALUATION

Evaluation of PMB is depicted in an algorithm in Figure 1. Transvaginal ultrasound (TVUS) can be used as an initial diagnostic study, which may demonstrate leiomyomas, endometrial thickening, or focal masses. TVUS has a sensitivity of 96% for detecting endometrial cancer and 92% for determining endometrial abnormality.[6]

Per ACOG Committee Opinion, if endometrial lining is less than or equal to 4 mm on TVUS, endometrial sampling is not required. Based on follow-up studies of women with PMB who had an endometrial stripe ≤ 4 mm, endometrial cancer rates are 0.1%. Patients may be monitored at 4 and 12 months with repeat ultrasound if bleeding persists.[8]

Figure 1. Algorithm for Work Up of Postmenopausal Bleeding [7]



SPECIAL POPULATIONS

Patients on Tamoxifen

Tamoxifen may be associated with an increased risk of endometrial proliferation and hyperplasia, polyp formation, invasive carcinoma, and uterine sarcomas.[9] Women on tamoxifen should be closely monitored for symptoms of hyperplasia but unless the patient is at high risk for endometrial cancer, surveillance testing is not recommended because it may lead to more invasive and costly interventions.[9]

Patients on Hormone Therapy

Women with postmenopausal bleeding on hormone therapy (HT) have a significantly lower incidence of endometrial cancer compared with women not using HT.[10] It is important to identify acceptable bleeding patterns for specific types of HT and the appropriate timing of further investigation. About 70 to 90% of women on combined estrogen and progesterone therapy (EPT) with cyclical progesterone have bleeding, and it is considered normal if bleeding starts after the ninth day of progesterone use.[11] Bleeding before this time or a change in the interval or amount of blood flow warrants endometrial assessment. With continuous-combined EPT, about 90% of women stop bleeding after one year.[11] Evaluation of the endometrium is recommended during the first year if bleeding is heavy , prolonged or if any bleeding occurs beyond one year of use.[11]

Unopposed estrogen should not be used in women with an intact uterus as 62% develop hyperplasia after three years of treatment with about half having complex hyperplasia or atypia.[11] If unopposed estrogen is used as therapy in these women, endometrial evaluation should be performed at baseline, annually and if any vaginal bleeding occurs.

MANAGEMENT

If initial work-up of PMB is negative, patient should be re-evaluated and repeat ultrasound performed if bleeding persists. Management and treatment of possible causes of postmenopausal bleeding are illustrated in Table 2.

Table 2: Management of Common Causes of Postmenopausal Bleeding [12, 13, 14,15,16]

Diagnosis	Treatment	Comments
Vaginal Atrophy	Vaginal Moisturizers (Slippery Stuff®, Astroglide®)	Improves moisture and coital discomfort. Does not reverse atrophic changes
	Vaginal Estrogen Creams	Estrace® 100 mcg estradiol/g – insert 1 g daily x 2 weeks then 2-3x/week Premarin® 0.625 mg CE/g – 0.5 g 2x/week
	Vaginal Estrogen Ring	Estring® 7.5 mcg estradiol/day over 90 days – remove & replace q3 months
	Vaginal Estrogen Tablet	Vagifem® 10 mcg estradiol – insert 1 tab daily x 2 weeks then 1 tab 2x/week
Endometrial Hyperplasia without atypia	Progestin therapy Repeat EMB in 3-6 months	Medroxyprogesterone acetate (Provera®) - continuous: 10 mg PO daily x 3-6 months or - cyclical: 10 mg daily for 12 days each month Levonorgestrel-releasing Intrauterine Device (Mirena®)
Endometrial Hyperplasia with atypia	Hysterectomy with or without bilateral salpingo-oophrectomy	Patients who wish to preserve fertility or is not a candidate for surgery may be treated with progestin therapy
Uterine Leiomyomas	No intervention necessary.	Typically becomes smaller and less symptomatic if no hormone therapy. May need to evaluate for sarcoma if new or enlarging. Consider myomectomy or hysterectomy
Endometrial Polyps	Polypectomy under hysteroscopic guidance	95% of endometrial polyps are benign; higher risk of malignancy in PM women and those on tamoxifen
Cervical Polyps	Polypectomy	

REFERENCES

1. Newell S, Overton C. Postmenopausal bleeding should be referred urgently. *The Practitioner*. 2012; 1749: 13-15.
2. Davidson KG, Dubinsky TJ. Ultrasonographic evaluation of the endometrium in postmenopausal vaginal bleeding. *Radiol Clin N Am* 2003; 41:769-780.
3. Goldstein RB *et al*. Evaluation of the woman with postmenopausal bleeding: Society of Radiologists in Ultrasound-Sponsored Consensus Conference statement. *J Ultrasound Med* 2001;20:1025–36.
4. Chen LM *et al*. (2012, August 13). Endometrial Carcinoma: Epidemiology and risk factors. Retrieved September 2, 2012 from UpToDate online textbook: http://www.uptodate.com
5. Buchanan E *et al*. Endometrial Cancer. *American Family Physician*. 2009; 80: 1075-1080
6. Albers J *et al*. Abnormal Uterine Bleeding. *American Family Physician*. 2004; 69: 1915-26
7. Keehbauch J, Hill A, Thompson K. Menstrual Disorders. FP Essentials. AAFP Home Study. American Academy of Family Physicians. Oct 2008 Vol. 353ACOG
8. ACOG Committee Opinion. The role of Transvaginal Ultrasound in the Evaluation of Post Menopausal Bleeding. Number 440. August 2009
9. ACOG Committee Opinion. Tamoxifen and Uterine Cancer. Number 336, June 2006
10. Burbos N, Musonda P et al. Postmenopausal vaginal bleeding in women using hormone replacement therapy. Menopause Int. 2012; 18: 5-9.
11. Greendale G, Lee N, Arriola ER. The Menopause. *The Lancet*. 1999; 353: 571-580
12. Tsai MC, Goldstein SR. Office Diagnosis and Management of Abnormal Uterine Bleeding. *Clinical Obstetrics and Gynecology* 2012; 55: 635-650.
13. Bachmann G, Santen RJ. Treatment vaginal atrophy. In: UpToDate, Barbieri, RL (Ed), UpToDate, Waltham, MA, 2012.
14. Giuntoli RL, Zacur HA. Management of Endometrial Hyperplasia. In: UpToDate, Goff, B (Ed), UpToDate, Waltham, MA, 2012.
15. Stewart EA. Overview of treatment of Uterine Leiomyomas (Fibroids). In: UpToDate, Barbieri, RL (Ed), UpToDate, Waltham, MA, 2012.
16. Stewart EA. Endometrial Polyps. In: UpToDate, Barbieri, RL (Ed), UpToDate, Waltham, MA, 2012.