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Hello and welcome to another episode of the APAOG podcast. I'm your show's host and creator Morgan Bechtel. And today I have a little something different for you. In this episode, we'll be exploring and learning about postmenopausal vaginal bleeding through the lens of a case study.

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Now, of course, the details in this case are entirely fictional, but hopefully it will do a good job of reflecting a case you might find in an OBGYN clinic. As always, the information in this podcast is for educational purposes only.

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If you or a loved one has post menopausal vaginal bleeding. Please consult your healthcare provider.

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With that, grab a seat. Put your detective cap on, and let's dive in.

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The patient is a 56 year old Caucasian, female G3P1113 with a past medical history of hypertension, and she's in your office today for concerns of post menopausal bleeding. Approximately 2 weeks ago she had an episode of vaginal bleeding lasting about 5 days in length. The bleeding started out light, then became a bit heavier, mimicking her previous menses.

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The patients last menstrual period was approximately 5 years ago and she denies any vaginal bleeding. Prior to this episode, we review her medication list, which is as follows. Lisinopril hydrochlorothiazide, 10 milligrams Dash, 12.5 milligrams 1 tablet by mouth day amlodipine 5 milligrams, 1 tablet by mouth once a day.

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A generic over the counter Women's Multivitamin 1 tablet a day and she uses the occasional melatonin 3 milligrams as needed for insomnia

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Going into the visit, what other information do we need to collect? Well, we're going to want to ask about any associated symptoms. Is she having any pelvic pain, any abnormal vaginal discharge or abnormal vaginal odor? She having any pain with sex? Does she have any blood in the urine or stool? Is she easily bruised?

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How about any low back pain? Constipation. Dysuria.



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Has she had any unexplained weight loss. Here, we're looking for symptoms that point us in direction of the cause of this abnormal uterine bleeding. We can remember the common causes of abnormal uterine bleeding, with the trusty acronym PALM COIN, which stands for polyps. Adenomyosis leiomyomas, malignancy or hyperplasia?

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Coagulopathy, ovulatory dysfunction and endometrial causes iatrogenic and not yet classified.

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We also want to know about a patient's social history. Specifically, are they a smoker? Why do we care about a patient smoking status? Well, it may play a role in if or how much estrogen replacement we recommend for a patient as both estrogen and smoking can increase the risk of venous thromboembolism. We also want to know about the patient's sexual activity.

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Prior to this episode of Bleeding, did she have any vigorous sexual activity, either consensual or non consensual?

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Has she had any new sexual partners? Is she having any signs or symptoms of STIs? Trauma to the vaginal tissue can of course cause bleeding.

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STIs and public inflammatory disease can result in endometritis, which can present as vaginal bleeding, although this is usually associated with pelvic pain and fever.

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We want to ask about the patient's surgical history. Has she had any recent pelvic procedures, like a DNC, while uncommon surgical trauma or post OP infection from transcervical procedures can result in endometritis, which again can cause vaginal bleeding. We also want to ask about hormone use.

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Is the patient on any form of exogenous hormone replacement or has she ever used it? Excessive doses of estrogen, especially unopposed estrogen, can cause endometrial hyperplasia and result in vaginal bleeding. We want to make sure that we're asking the patient about her past medical history as well as her family medical history.

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Is there any history of cervical, uterine, ovarian or breast cancer? What about bleeding or clotting disorders? Any deep vein thrombosis or pulmonary embolisms or thyroid disorder?



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A family history of cervical, uterine and breast cancer increases the risk of uterine malignancy and of course we want to know about bleeding disorders as this can cause abnormal vaginal bleeding and the past medical history of DVT's or PE's determines if a patient may go on hormone replacement therapy or what type they might get.

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Meaning oral versus transvaginal. Next, we want to ask about the patient's screenings.

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Specifically, when was her last Pap smear, has she ever had an abnormal pap smear? And when was her last mammogram again? We want to evaluate the patient's risk of cervical malignancy.

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Now in this case, the patient denies any pelvic pain, any abnormal discharge, any abnormal vaginal odor, pain with sex, pain with urination, Constipation or back pain. She has not had any blood in the urine or stool. She denies any easy bruising. She has not had any unexplained weight loss, and she denies any changes in her sexual activity.

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When asked about hormone use, the patient states she's never been on hormone replacement before.

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The patient states her last PAP was approximately 5 years ago, she states she didn't think she needed them anymore because she stopped her period. The patient admits she's never had an abnormal pap smear in the past.

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She also says that her last mammogram was approximately 7 months ago and it was normal. The patient also notes that she is not a smoker. The patient denies any family history of cervical, uterine, ovarian or breast cancer, as well as bleeding or clotting disorders or thyroid disorders. The patient notes that her grandmother did have a hysterectomy at a young age.

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The actual age was unknown and the patient doesn't.

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So why now we move on to the physical exam. The vitals are as follows. Height is 5 foot two inches, weight is 138 lbs. BMI is 25.2. Blood pressure is 138 / 86. Heart rate is 76, oxygen saturation is 99% and respiratory rate is 12.



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The patient appears to be appropriately addressed and well nourished. She's A&Ox3 appears mildly anxious, but overall calm, and she answers questions appropriately. Her skin is warm without evidence of pallor, achimosis, rashes or trauma.

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She's normal. Capillary refill. There's no presence of any pitting or spooning on the nails. Eyes are PERRLA. There's no pallor of conjunctiva. The eyes, no pallor of nasal or oral mucosa, no glossy tongue or oral lesions. The tracheas midline. No visible or palpable thyroid megaly or thyroid nodules.

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The heart has a regular rhythm. There's no murmurs, clicks, or rubs. There is no evidence of decreased lung sounds, no wheezing, rhonchi, or rails. The abdomen is soft. There's no visible distension. Bowel sounds are normal, active in all quadrants. There is no tenderness to palpation in any quadrant of the abdomen, there's no palpable masses hepatomegaly or splenomegaly the extremities are atraumatic. She has full range of motion in all joints, and there's no visible bony abnormalities for the pelvic exam. There is no visible abnormalities of the Mons pubis, the labia minora or majora, their urethra or vaginal orifice. There's no notable lesions or ulcerations.

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The inguinal lymph nodes are not enlarged or tender for the internal exam. There's no abnormal discoloration, lesions, or ulceration of the vaginal walls. There's no discharge in the vaginal vault. The cervix shows no abnormal color or texture.

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There's no lesions, nodules, or ulcerations. There's no abnormal discharge or bleeding from the cervical as. And since it's been five years since her last pap smear, you decide to take samples for Pap smear as well and bimanual exam. The uterus is retroverted, the ovaries are not enlarged, and there's no cervical motion, tenderness and no palpable masses.

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Having gathered all of this information, what tests would you like to order?

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For labs, we'll start off looking for a CBC that's going to tell us if there's any anemia or thrombocytopenia. A CMP is going to look for evidence of metabolic abnormalities and electrolyte imbalances, iron panels going to help evaluate for iron deficiency, of course, we want to check the thyroid abnormalities with the T4 and TSH.

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That pap smear we collected is going to look for evidence of cervical cancer.



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And if the patient is considered to be at risk for STI's, then we would order an STI panel, which generally includes HIV, RPR, syphilis, hepatitis C, gonorrhea, Chlamydia and Trichomonas. For imaging, we'd consider a transvaginal ultrasound to evaluate for endometrial thickness, uterine fibroids, ovarian cysts, and other masses.

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The results of this testing returns and it shows a CBC with a white blood cell count of 7.2, a red blood cell count of 4.70 and H&H of 13.5, and 38% and MCV of 90.2 MCH of 31.

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MCHC of 34 platelets of 274 CMP shows a sodium of 139 potassium of 4.2 BUN of 16. Serum creatinine of 1.0 glucose of 87 calcium and 9.4 chloride at 100, ALT of 35 and AST of 47 bilirubin is 0.83 and albumin is 4.3.

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Thyroid testing comes back and shows a free T4 of 1.34 and a TSH of 2.1.

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The iron panel returns and shows an iron of 20 ferritin of 184.

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And TIBC of 380, you did order an STI panel, all of which was negative. Now, for those of you who don't have normal lab ranges burned into your brain over all these labs are benign. There's no evidence of anemia or other blood cell abnormalities, thyroid disorders, or iron deficiency. The Pap smear comes back with evidence of ascus.

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Or atypical squamous cells of undetermined significance. It's negative for HPV, including strains 16 and 18. The transvaginal ultrasound comes back, and it returns with the following interpretation. Uterus is normal in size and echo texture.

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The endometrial stripe is 13mm, ovaries are no more in size, no masses or fluid noted in the adnexa or cul-de-sac. Now that we've gathered this data, where do we go from here?

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Given her postmenopausal vaginal bleeding and thickened endometrial stripe. We need to rule out an endometrial cancer as a reminder, the risk of endometrial carcinoma becomes increasingly more frequent relative to benign disease as the endometrial thickness approaches 20mm, the general rule of thumb is postmenopausal patients with an endometrial thickness greater than 4mm, should get an endometrial biopsy to rule out the possibility of malignancy.



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An endometrial biopsy is a procedure that can be done in office and generally does not require the use of general anesthesia. While the process is generally performed without significant pain, discomfort can be minimized by administering NSAIDs 30 to 60 minutes before the procedure. Paracervical block topical lidocaine spray and intrauterine. Installation of local anesthetic can also help reduce pain, diaphragmatic breathing and visualization can also further help patients pain to perform the procedure. The patient is placed in the lithotomy position.

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And for non medical peeps, that's means legs up in the stirrups and the provider starts by performing a bimanual exam to feel the size, shape and position of the uterus. Then an antiseptic solution is used to clean the cervix, a device called a tenaculum. Think of small metal hook or clamp may be used to hold the cervix steady, while a thin suction tube is inserted into the uterus.

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The tube is extended the full length of the uterus, which is on average 6 to 8 centimeters, and then using a suction technique it collects tissue samples from the endometrium as the tube is withdrawn, the sample collection itself is very brief, approximately 5 to 15 seconds. Most bleeding can be controlled with pressure via cotton swabs or a sponge stick. If bleeding persists, a ferric sub sulfate or monocyte solution or silver nitrate sticks are used to cauterize the site. The downsides of endometrial biopsy?

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Are that its blind procedure and the operator may unintentionally not enter the uterine cavity or sample only the lower uterine segment.

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Sometimes endometrial biopsy can yield a scant specimen, which is not reflective of the underlying pathology. Sometimes it may only sample a portion of the endometrium, particularly in patients with a large uterus.

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Intracavitary fibroids or uterine anomalies. Another downside is that the endometrial biopsy is usually performed without anesthesia, and patient discomfort may limit the ability to obtain an adequate sample.

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The only absolute contraindication to endometrial sampling is the presence of a viable and desired pregnancy.

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A bleeding condition is a relative contraindication since bleeding may be excessive in such patients.



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In general, endometrial sampling may be performed in patients who are on anticoagulant therapy. If coagulation parameters have consistently been within the standard therapeutic range, another contraindication is acute vaginal, cervical or pelvic inflammation. The procedure should be deferred if possible until the infection has been treated.

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Over our case, the biopsy has been performed and was tolerated well and there were no complications.

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The results return and it shows no evidence of malignancy. Yay. But what do you do if the patient continues to have vaginal bleeding.

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The benign vaginal bleeding could be caused by a couple of different things.

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Could be caused by atrophy of proliferative endometrium, meaning an estrogen effect. A secretory endometrium. The progesterone effect could be caused by disordered or desynchronized endometrium, which implies a regular shedding of the endometrium secondary to unopposed estrogen, as well as endometritis. We'll start with proliferative endometrium.

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The treatment of proliferative endometrium should be solely based on the nature of the patients symptoms that prompted the biopsy and effect of such symptoms on a patient's quality of life. If symptoms are impacting the patients, quality of life consideration can be given to either the levonorgestrel IUD, AKA the Mirena® or progestins.

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However, the IUD is favored in postmenopausal patients with a history of endometrial hyperplasia. A hysterectomy can also be considered in these patients. The frequency and duration of follow up for such patients is uncertain. Proposed menopausal patients some experts perform an immaterial sampling every three to six months for about a year.

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Next, we'll talk about endometritis or inflammation of the endometrium. This can either be acute or chronic. Acute endometritis is characterized by the presence of micro abscesses or neutrophils within the endometrial glands, while chronic endometritis is distinguished by variable numbers of plasma cells within the endometrial stroma.



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Acute endometritis is usually the result of an infection like a pelvic inflammatory disease or trauma after a transcervical procedure. An endometrial culture can be performed to look for evidence of infection and treat accordingly. Chronic endometritis is most commonly idiopathic.

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However, it can also be caused by intrauterine growths, like a submucosal leiomyoma or polyps, as well as radiation therapy. Empiric antimicrobial therapy appears to improve symptoms and histology in some patients with chronic endometritis. A course of doxycycline 100 milligrams twice a day for 10 to 14 days is recommended.

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If the patient is allergic to doxy, then azithromycin is recommended at 500 milligrams once and then 200 milligrams once a day for an additional four days.

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The rationale is that negative cultures may represent a false negative test for detecting chlamydia or the presence of other difficult to cultivate microbes and doxycycline is active against some most common bacteria in mycoplasma. Now. Last but not least, for this patient.

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If you remember from earlier, her PAP returned with ascus and negative HPV general recommendations are to have the patient repeat the PAP with HPV testing in one year. If the ascus persists, then we would consider moving forward with the colposcopy to further evaluate.