

Benign Lesions of The Uterus

Topic- based Uworld Questions

Block 1, 2, 7, 8



A 32-year-old woman comes to the office with pelvic pain for the past 2 days after her menstrual period ended. The patient says that the pain "feels like labor contractions" and ibuprofen provides no relief. She has a history of regular but heavy menstrual cycles and occasionally passes clots. The patient is sexually active and uses the rhythm method for contraception. Five years ago, she had a spontaneous abortion treated by suction dilation and curettage. Papanicolaou test was normal 2 years ago. Blood pressure is 140/90 mm Hg and pulse is 113/min. Pelvic examination shows an irregularly enlarged uterus. The cervix is dilated 5 cm with a spherical mass visible through the external os. The mass is firm and smooth, and slight bleeding is noted around it. Which of the following is the most likely diagnosis?

- A. Carcinoma of the cervix
- B. Cystocele
- C. Leiomyoma uteri
- D. Molar pregnancy
- E. Retained tampon
- F. Threatened abortion

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- A. Carcinoma of the cervix (1%)
- B. Cystocele (3%)
- C. Leiomyoma uteri (71%)
- D. Molar pregnancy (10%)
- E. Retained tampon (3%)
- F. Threatened abortion (10%)

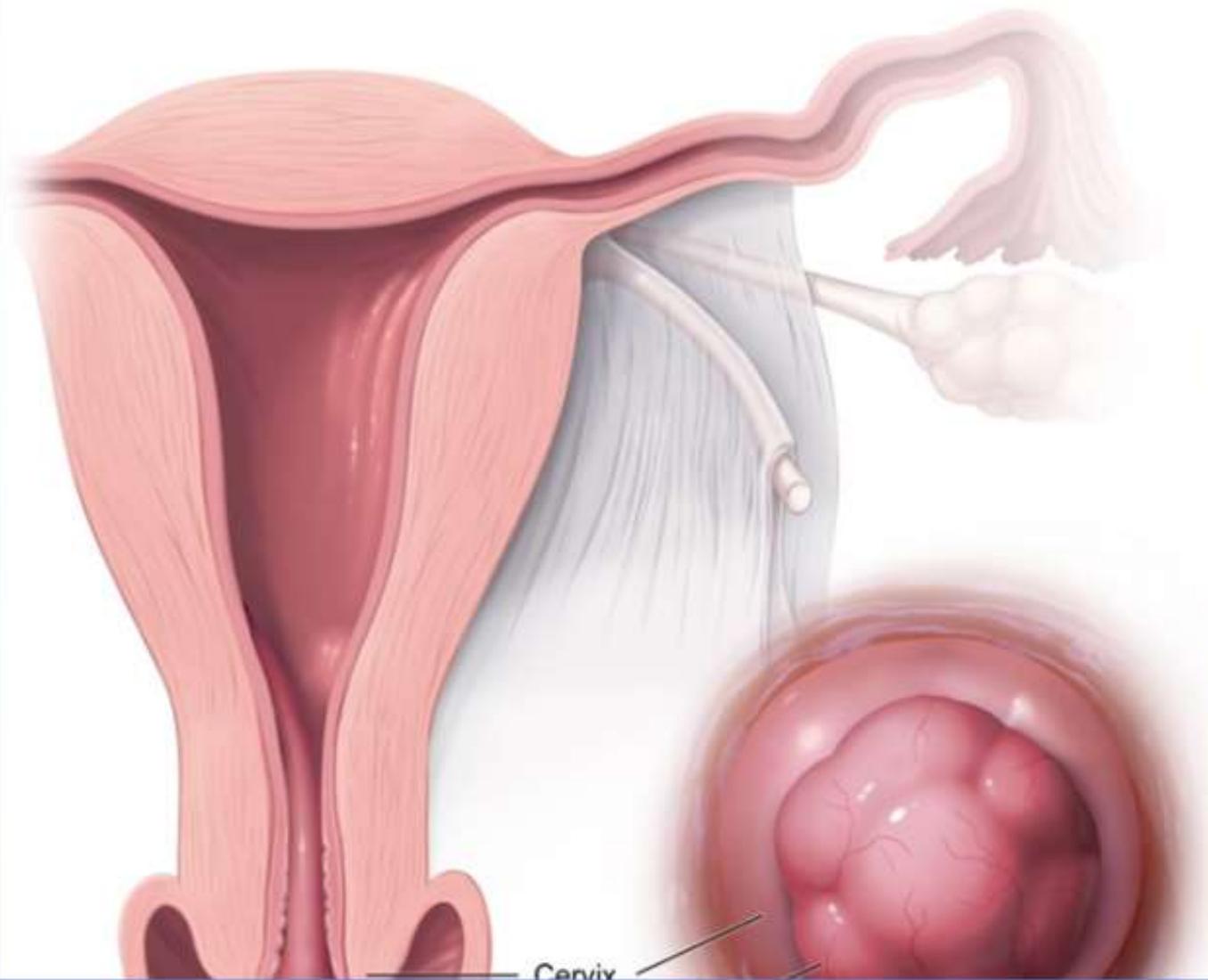
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Correct answer
C71%
Answered correctly02 secs
Time Spent04/26/2020
Last Updated

Explanation

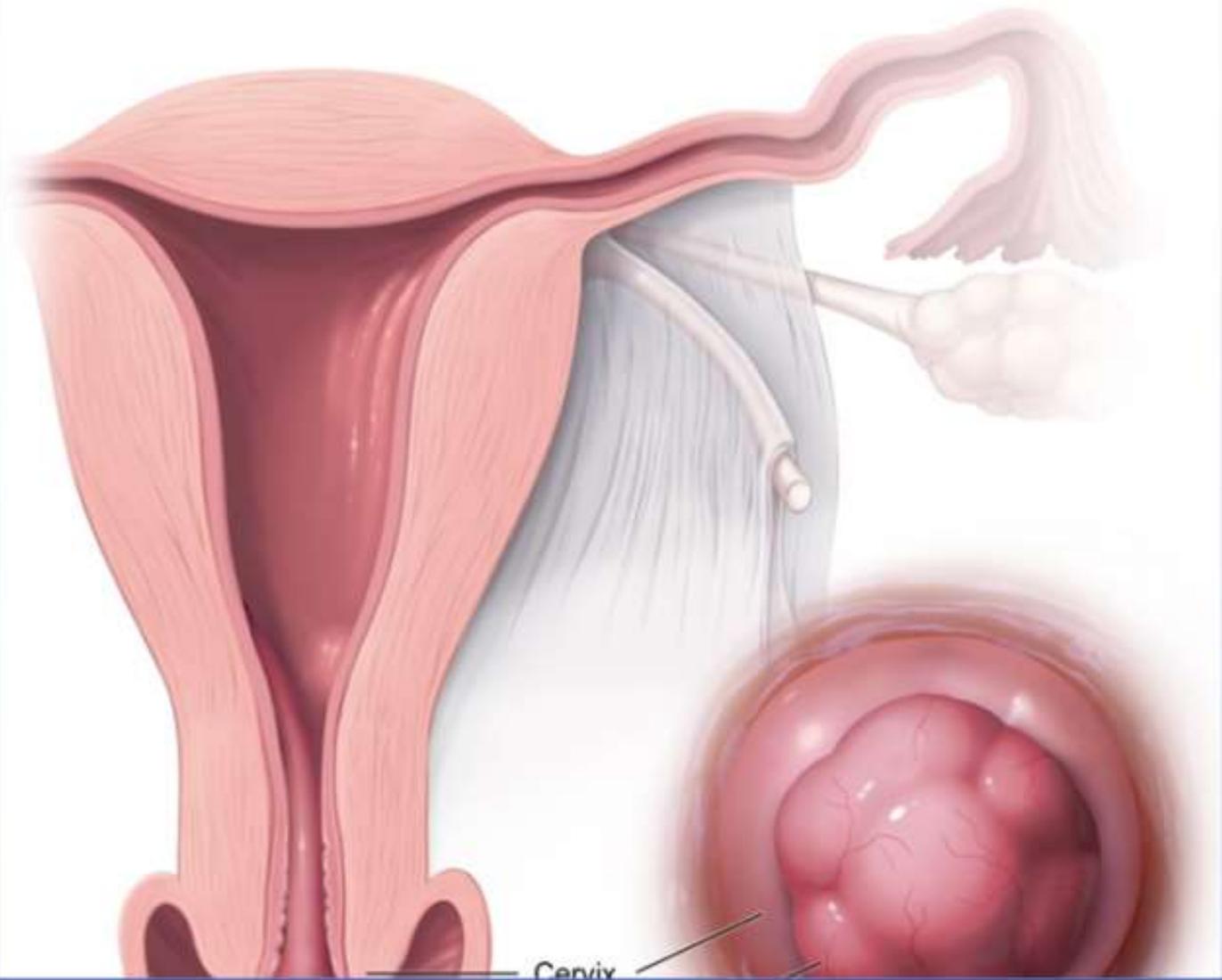
Prolapsing uterine fibroid

Prolapsing uterine fibroid

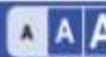


Cervix

Prolapsing uterine fibroid



Cervix



A uterus with irregular enlargement on examination suggests uterine leiomyomata. This patient has the typical presentation and examination findings of **prolapsing leiomyoma uteri** (fibroid). Speculum and bimanual examination confirms the firm, smooth, round mass at the cervical os consistent with an **aborting submucous myoma**. The diagnosis is entirely clinical due to the specific presentation, although ultrasonography can be performed to assess for additional fibroids.

Submucous fibroids arise from the myometrium immediately under the endometrial lining and protrude into the uterine cavity. The most common symptom is **heavy and prolonged menstrual bleeding** due to endometrial distortion. When entirely in the endometrial cavity, submucosal fibroids are termed intracavitary and can prolapse through the cervical os during expulsion from the uterus while hanging from a pedicle attached to the myometrium. This expulsion causes labor-like **pain** due to mechanical **cervical dilation** by the solid mass and is preceded by heavy vaginal bleeding. The patient's elevated blood pressure and pulse are likely due to significant discomfort, although anemia may also be present. Treatment of an aborting myoma is with surgical removal and can typically be accomplished vaginally.

Other consequences of large submucous myomata include infertility, recurrent miscarriage, and pregnancy complications (eg, fetal malpresentation, fetal growth restriction).

(Choice A) Advanced carcinoma of the cervix could present as an exophytic, friable, irregularly shaped lesion and with postcoital spotting, not heavy menses and a firm, round mass. Cervical carcinoma takes many years to develop and is unlikely in a patient with a recent normal Papanicolaou test.

(Choice B) A cystocele (bladder prolapse) is characterized by pelvic pressure, urinary symptoms, and/or a palpable vaginal bulge, not heavy menses. The cervix would remain behind the cystocele and would appear normal (ie, without any masses).

(Choices D and F) Pregnancy is unlikely in this patient who just had her menstrual period, despite the poor relative effectiveness of rhythm method contraception. In addition, although a threatened abortion may present with heavy vaginal bleeding, the cervix remains closed, not dilated. Tissue from an ongoing abortion is soft rather than the firm consistency of a fibroid. Typical findings in molar pregnancy are hyperemesis gravidarum and a uterine size-date discrepancy, not a firm mass at the cervical os.

(Choice E) A retained tampon would be located in the posterior vagina rather than inside the uterus at the cervical os. The tampon would be soft, foul-smelling, and <5 cm in size rather than a firm and round mass distending the cervix.

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Educational objective:

Submucous fibroids arise from the myometrium immediately under the endometrial lining and protrude into the uterine cavity. They commonly cause heavy and prolonged menstrual bleeding and can prolapse through the cervical os, presenting with a typical labor-like pain due to cervical distension by the solid mass.

A 38-year-old nulliparous woman complains of lower abdominal discomfort and chronic constipation. She has cramping with her menses that causes her to miss a day of work each month. Menses occur regularly at 28-day intervals with no bleeding or spotting between cycles. Past medical history is significant for asthma and an appendectomy at age 12. Her mother had breast cancer at age 55, and her maternal grandmother died of ovarian cancer at age 66. Vital signs are within normal limits. Pelvic examination shows an enlarged uterus that is irregular and mobile with a prominent posterior mass. Which of the following is the best next step in management of this patient?

- A. BRCA1 and BRCA2 genetic testing
- B. CT scan of the abdomen and pelvis
- C. Diagnostic laparoscopy
- D. Endometrial biopsy
- E. Pelvic ultrasound

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- A. BRCA1 and BRCA2 genetic testing (2%)
- B. CT scan of the abdomen and pelvis (8%)
- C. Diagnostic laparoscopy (6%)
- D. Endometrial biopsy (6%)
- E. Pelvic ultrasound (75%)

Omitted

Correct answer
E75%
Answered correctly01 sec
Time Spent01/17/2020
Last Updated

Explanation

Uterine leiomyomas (fibroids)

- Heavy, prolonged menses
- Pressure symptoms

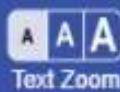
Uterine leiomyomas (fibroids)	
Clinical features	<ul style="list-style-type: none"> • Heavy, prolonged menses • Pressure symptoms <ul style="list-style-type: none"> ◦ Pelvic pain ◦ Constipation ◦ Urinary frequency • Obstetric complications <ul style="list-style-type: none"> ◦ Impaired fertility ◦ Pregnancy loss ◦ Preterm labor • Enlarged, irregular uterus
Workup	<ul style="list-style-type: none"> • Ultrasound
Treatment	<ul style="list-style-type: none"> • Asymptomatic: observation • Symptomatic: CHC, surgery

CHC = combined hormonal contraception.

This patient's presentation suggests uterine leiomyoma (myoma/fibroid), the most common pelvic tumor in reproductive-age women. [Uterine fibroids](#) are benign, smooth muscle tumors of the myometrium. Small fibroids are typically asymptomatic. Large fibroids can cause **local compressive symptoms** such as constipation, urinary frequency/retention, and back/pelvic pain, as in this patient. Many patients also have **abnormal menstrual bleeding** (heavy and prolonged) and reproductive dysfunction. A uterus with fibroids typically feels **enlarged, firm, and irregular** on examination.

Ultrasound is the preferred initial diagnostic imaging modality for most patients. It is widely available, cost effective, and has a high sensitivity (>95%) for detecting uterine fibroids and ovarian pathology.

(Choice A) BRCA1 and BRCA2 mutations are the most common cause of hereditary breast and ovarian cancers. Genetic testing is done only



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(Choice A) BRCA1 and BRCA2 mutations are the most common cause of hereditary breast and ovarian cancers. Genetic testing is done only after a thorough risk assessment, including a detailed family history for breast and ovarian cancer. Although BRCA testing might give information on the overall breast and ovarian cancer risk in this patient, it would not clarify the etiology of the presenting pelvic mass.

(Choice B) Pelvic ultrasound has a higher sensitivity than CT for both uterine and ovarian pathology. Ultrasound also avoids exposing the patient to the risks of ionizing radiation and iodinated contrast.

(Choice C) Diagnostic laparoscopy is used to confirm clinical suspicion of endometriosis or pelvic adhesions, as both conditions are not reliably diagnosable by radiologic imaging. This patient presents with a palpable mass and bulk-related symptoms and should have pelvic imaging first.

(Choice D) Endometrial biopsy is performed to evaluate the uterine lining when there is a clinical suspicion of hyperplasia or carcinoma. Biopsy is generally recommended for women age ≥ 45 with abnormal or postmenopausal bleeding. This woman's menstrual pattern is normal.

Educational objective:

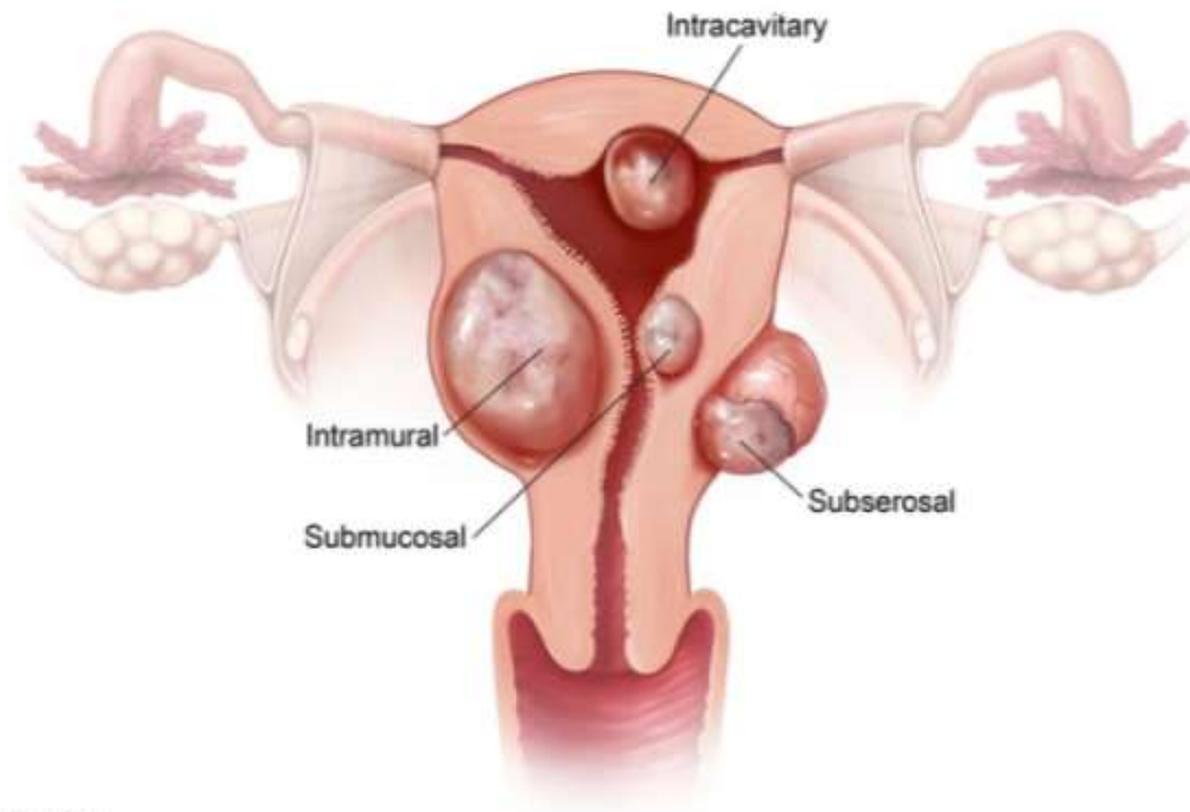
Pelvic ultrasound is the preferred initial imaging modality for suspected gynecological tumors. It has high sensitivity for diagnosing uterine fibroids and ovarian pathology.

References

- [Accuracy of magnetic resonance imaging and transvaginal ultrasonography in the diagnosis, mapping, and measurement of uterine myomas.](#)

Exhibit Display

Uterine fibroids



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diagnosable by radiologic imaging. This patient presents with a palpable mass and bulk-related symptoms and should have pelvic imaging first.

A 36-year-old nulliparous woman comes to the emergency department after a syncopal episode while at work as a surgical technician. Her colleagues gave her 1 L normal saline before she arrived. The patient is currently on day 10 of her menses, which have become progressively heavier and longer over the past year, at regular 28-day intervals. Review of systems is significant for frequent lightheadedness and palpitations. She is sexually active with her boyfriend and takes combined hormonal contraceptives. Her temperature is 36.7 C (98 F), blood pressure is 100/60 mm Hg, and pulse is 112/min. Pelvic examination shows an irregularly enlarged uterus 12 weeks in size. Her hemoglobin is 4.9 g/dL and mean corpuscular volume is 75 fL. Urine pregnancy test is negative. Which of the following is the most likely cause of this patient's anemia?

- A. Cyclic bleeding of ectopic endometrial glands
- B. Endometrial glands within the myometrium
- C. Endometrial hyperplasia with atypia
- D. Impaired platelet aggregation
- E. Proliferation of smooth muscle cells within the myometrium
- F. Viral infection of the cervical transformation zone

Submit

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- A. Cyclic bleeding of ectopic endometrial glands (6%)
- B. Endometrial glands within the myometrium (19%)
- C. Endometrial hyperplasia with atypia (7%)
- D. Impaired platelet aggregation (1%)
- E. Proliferation of smooth muscle cells within the myometrium (65%)
- F. Viral infection of the cervical transformation zone (0%)

Omitted

Correct answer
E65%
Answered correctly02 secs
Time Spent05/12/2020
Last Updated

Explanation

Causes of abnormal menstrual bleeding

Causes of abnormal menstrual bleeding	
Diagnosis	Clinical features
Fibroids	<ul style="list-style-type: none"> • Heavy menses • Constipation, urinary frequency, pelvic pain/heaviness • Enlarged uterus
Adenomyosis	<ul style="list-style-type: none"> • Dysmenorrhea, pelvic pain • Heavy menses • Bulky, globular & tender uterus
Endometrial cancer/hyperplasia	<ul style="list-style-type: none"> • History of obesity, nulliparity, or chronic anovulation • Irregular, intermenstrual, or postmenopausal bleeding • Nontender uterus

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Abnormal uterine bleeding (AUB) is defined as menstrual bleeding that is prolonged (>5 days) and heavy (>1 pad every 2 hours) with an irregular frequency. Chronic AUB can result in **symptomatic iron deficiency anemia**, which in turn can present as syncope, palpitations, and tachycardia. Gradual depletion of iron stores is evidenced by a low hemoglobin level and decreased mean corpuscular volume.

Leiomyomata uteri (fibroids), especially those that are submucosal or intramural, are a common cause of heavy menstrual bleeding. **Proliferation of smooth muscle** cells within the myometrium can cause profuse menses as well as **irregular uterine enlargement**. Oral contraceptives can decrease bleeding duration and volume but may not completely resolve symptoms. Patients can still have symptomatic anemia and may require transfusion and more invasive fibroid treatment (eg, myomectomy, uterine artery embolization, hysterectomy).

(Choice A) Cyclic bleeding of ectopic endometrial glands is the pathogenesis of **endometriosis**, a condition that typically presents with pelvic pain, not anemia, heavy bleeding, or an irregularly enlarged uterus.

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(Choice A) Cyclic bleeding of ectopic endometrial glands is the pathogenesis of **endometriosis**, a condition that typically presents with pelvic pain, not anemia, heavy bleeding, or an irregularly enlarged uterus.

(Choice B) **Adenomyosis** is the proliferation of endometrial glands inside the uterine myometrium. Clinical features include a bulky, tender uterus that is uniformly enlarged.

(Choice C) Endometrial hyperplasia with atypia is part of the progression to endometrial carcinoma. Typical presentation includes postmenopausal bleeding with a normal-size uterus.

(Choice D) The hallmark of von Willebrand disease is impaired platelet aggregation due to a von Willebrand factor deficiency. This coagulopathy can cause AUB and anemia but without uterine enlargement.

(Choice F) Human papillomavirus infection of the cervical transformation zone can cause cervical cancer. Although focal cancerous changes are typically asymptomatic, advanced cervical cancer may present as postcoital spotting with a normal-size uterus, not with irregular uterine enlargement.

Educational objective:

Leiomyomata uteri (fibroids) are a proliferation of smooth muscle cells within the myometrium. Heavy menstrual bleeding is a hallmark, and patients may present with acute symptoms of anemia and an irregularly enlarged uterus.

References

- [The management of uterine leiomyomas.](#)