Adenomyosis/ Endometriosis

Topic- based Uworld Questions

Block 1, 2, 7, 8

A 46-year-old woman comes to the office for evaluation of heavy menstrual bleeding. The patient's menses previously occurred every 29 days and consisted of 4 days of moderate bleeding. However, for the past year her menses have occured every 27 days and have become increasingly heavy, consisting of 5 days of heavy bleeding. During the first 2 days of her menstrual period, the patient changes her tampon every 1-2 hours and often soaks through her clothes. Her menses have also become increasingly painful and unrelieved by ibuprofen, and she now has constant, dull pelvic pain between menses. The patient has had 3 cesarean deliveries and a bilateral tubal ligation. Blood pressure is 110/70 mm Hg and pulse is 92/min. BMI is 28 kg/m^2. Bimanual examination reveals a soft, tender, globular uterus that measures 11 weeks in size. Urine pregnancy test is negative. Hemoglobin is 9.8 g/dL and platelets are 180,000/mm^3. Which of the following is the most likely cause of this patient's symptoms?

- A. Adenomyosis
- B. Endometrial hyperplasia
- C. Endometriosis
- D. Gestational trophoblastic disease
- E. Menopause
- F. Uterine leiomyoma

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- ✓ A. Adenomyosis (69%)
- B. Endometrial hyperplasia (4%)
- C. Endometriosis (3%)
- D. Gestational trophoblastic disease (0%)
- E. Menopause (0%)
- F. Uterine leiomyoma (20%)

Omitted
Correct answer
A

69%
Answered correctly

02 secs
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03/23/2020
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Explanation

Adenomyosis	
Pathogenesis	• Abnormal endometrial tissue within the uterine myometrium
Risk factors	• Age >40 • Multiparity • Prior uterine surgery (eg, myomectomy)
Clinical features	• Dysmenorrhea • Heavy menstrual bleeding • Chronic pelvic pain • Diffuse uterine enlargement (eg, globular uterus) • ± Uterine tenderness
Diagnosis	• Clinical presentation • MRI & ultrasound: Thickened myometrium • Confirmation via pathology
Treatment	• Hysterectomy

This patient most likely has **adenomyosis** – a disorder caused by an abnormal collection of endometrial glands and stroma within the uterine myometrium. Adenomyosis typically presents in multiparous women age >40 with prior uterine surgery (eg, cesarean delivery). Clinical features of adenomyosis are as follows:

- New-onset **dysmenorrhea** due to cyclic accumulation of endometrial glands and stroma within the myometrium during menses.
- Continued endometrial gland accumulation causes a **symmetrically enlarged (globular) uterus** that is boggy and tender but does not exceed 12 weeks in size.
- The symmetrically enlarged uterus increases the endometrial cavity surface area, resulting in the concomitant **heavy menstrual bleeding** (eg, anemia) typically seen in these patients.

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As repeated menstrual cycles continue to cause endometrial shedding within the myometrium, patients often progress from dysmenorrhea to **chronic**, **dull pelvic pain**. Definitive diagnosis of adenomyosis is made histologically after hysterectomy, which is also the treatment for patients who do not improve with conservative management (eg, oral contraceptives).

(Choice B) Endometrial hyperplasia typically presents with irregular menstrual or postmenopausal bleeding rather than heavy, regular menses and dysmenorrhea.

(Choice C) Endometriosis can cause chronic pelvic pain and dysmenorrhea. In contrast to this patient, those with endometriosis typically have a small, nontender uterus that is immobile (eg, fixed).

(Choice D) Gestational trophoblastic disease (eg, hydatidiform mole, choriocarcinoma) can cause heavy menstrual bleeding and an enlarged uterus; however, patients typically have an elevated hCG (ie, positive pregnancy test), making this diagnosis less likely.

(Choice E) Women going through menopause can have heavy menstrual bleeding; however, the bleeding pattern is irregular and there is no associated uterine tenderness.

(Choice F) Leiomyomata uteri (fibroids) commonly cause heavy menstrual bleeding. However, although patients may experience pelvic pressure, chronic pelvic pain is uncommon. In addition, fibroids cause a firm, irregularly enlarged uterus.

Educational objective:
Adenomyosis typically presents in women age >40 with chronic pelvic pain, dysmenorrhea, and heavy menstrual bleeding. On physical examination, the uterus is symmetrically enlarged, boggy, globular, and tender.

References

- An update on adenomyosis.

Treatment
- Hysterectomy

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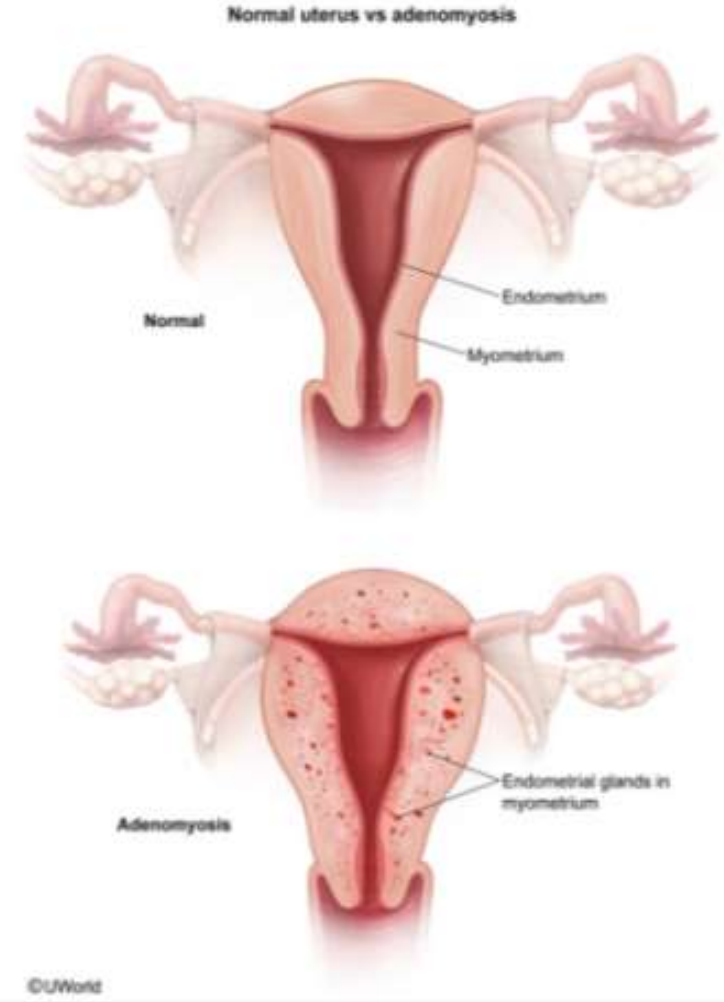

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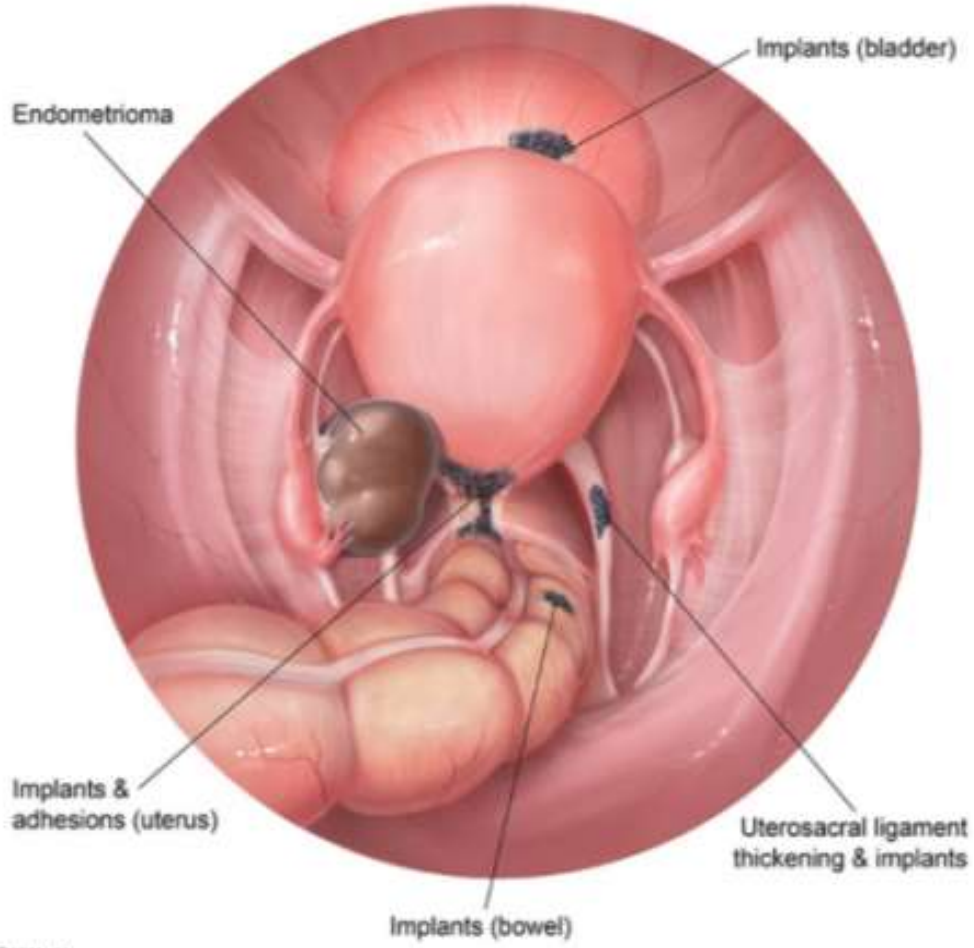
Pelvic endometriosis



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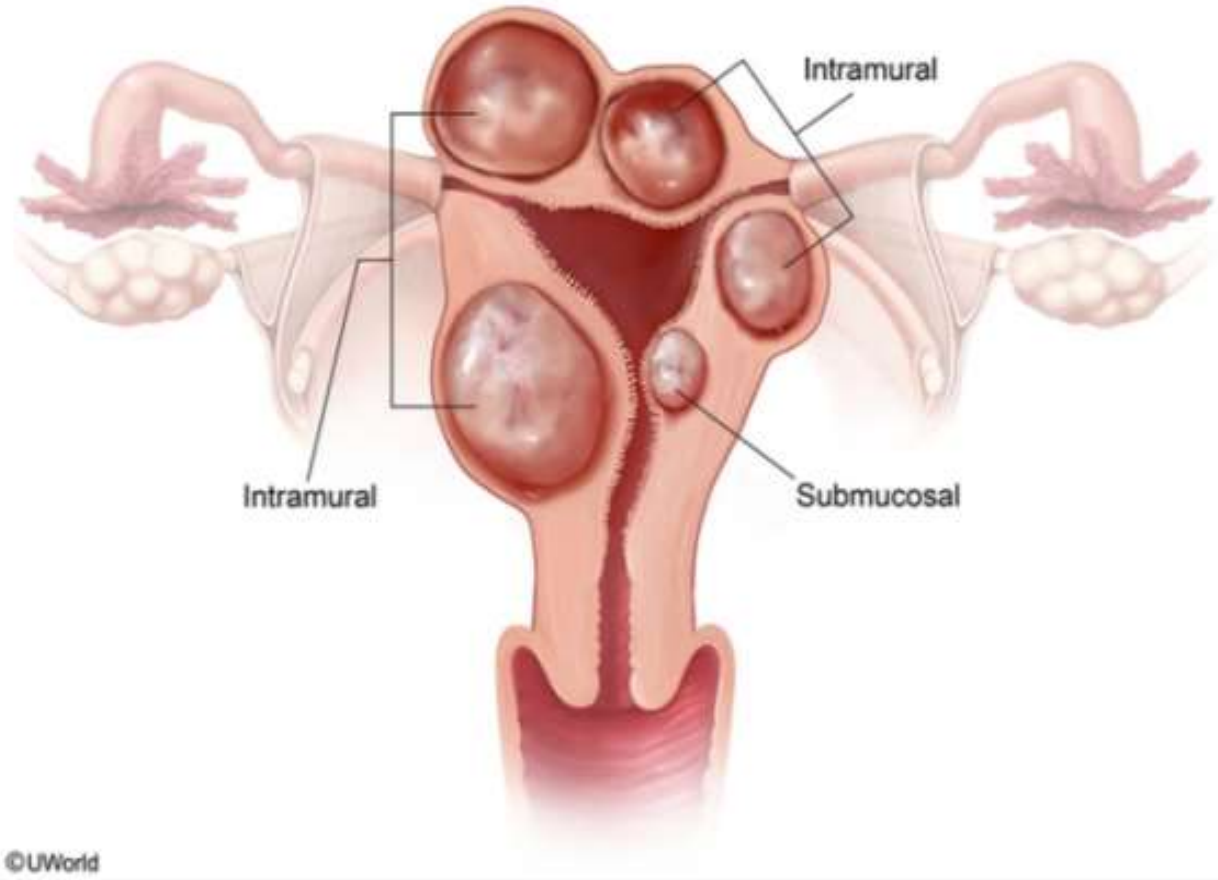
Uterine fibroids



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A 32-year-old woman, gravida 3 para 3, comes to the office for a 2-week postoperative follow-up after undergoing a laparoscopic bilateral tubal ligation. The patient has no pain or abnormal discharge from the incision sites. She has no chronic medical conditions, and this was her only surgery. The patient has a regular menstrual period that occurs every 30 days. She typically has abdominal cramping that resolves with ibuprofen after the first day and 5 days of bleeding. The tubal ligation was successfully performed; however, during the procedure, multiple subcentimeter, superficial lesions were visualized over the broad ligaments, bladder, and sigmoid colon. Biopsy of a lesion reveals endometrial glands, stroma, and hemosiderin-laden macrophages. Which of the following is the best next step in management of this patient?

A. Combined oral contraceptives
B. CT scan of the abdomen and pelvis
C. GnRH agonist therapy
D. Reassurance and observation only
E. Surgical resection of the lesions

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- A. Combined oral contraceptives (26%)
- B. CT scan of the abdomen and pelvis (2%)
- C. GnRH agonist therapy (2%)
- ✓ D. Reassurance and observation only (62%)
- E. Surgical resection of the lesions (6%)

Omitted
Correct answer
D

62%
Answered correctly

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06/22/2020
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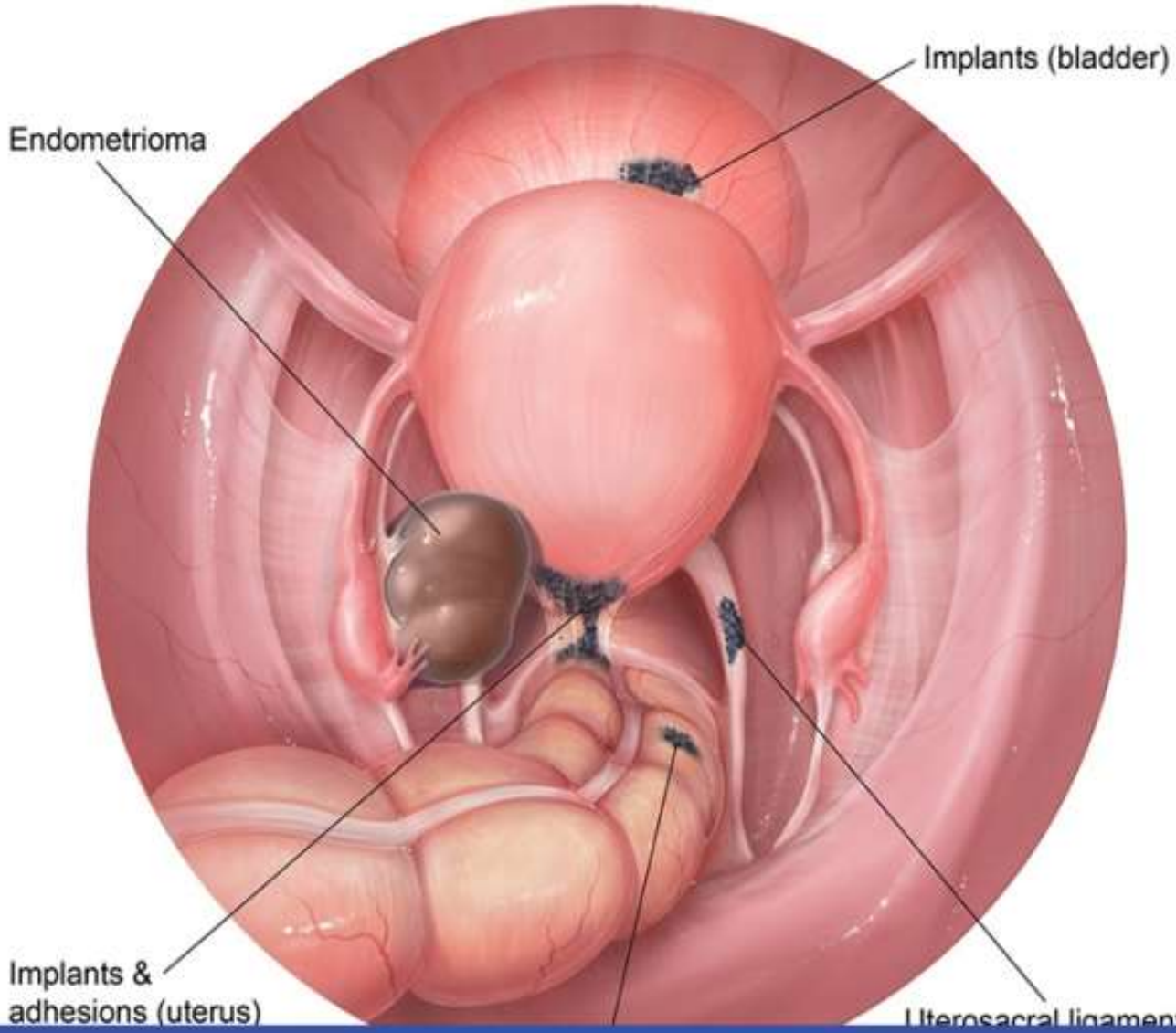
Explanation

Pelvic endometriosis

Pelvic endometriosis



This patient with multiple intraabdominal lesions revealing endometrial glands, stroma, and hemosiderin-laden macrophages most likely has **endometriosis**, or ectopic implants of endometrial tissue in the abdomen and pelvis. Endometriosis may occur due to a combination of cellular metaplasia and retrograde menstruation into the peritoneal cavity. Endometriosis implants, like normal endometrium, proliferate and shed in response to pulsatile estrogen and progesterone. This cyclic shedding without an outlet can cause chronic intraperitoneal inflammation, pain, and fibrosis. However, some patients are asymptomatic and **diagnosed incidentally** during an unrelated surgery (eg, this patient during tubal ligation).

Indications for treatment of endometriosis include:

- Chronic pelvic pain
- Dysmenorrhea, or increasingly worse lower abdominal cramping throughout menses, that is unrelieved by nonsteroidal anti-inflammatory drugs
- Dyspareunia
- Infertility (eg, due to pelvic adhesions)

In contrast, those with **asymptomatic** endometriosis, including this patient who has minimal menstrual cramping and no longer desires fertility (eg, tubal ligation), require **reassurance and observation only**.

(Choice A) Combined oral contraceptives can treat symptomatic endometriosis by suppressing ovarian function, thereby decreasing pulsatile stimulation of ectopic implants and resultant intraabdominal inflammation and pain. This patient has adequate pain relief with ibuprofen during menses and does not require contraception given her recent tubal ligation.

(Choice B) Diagnosis of endometriosis is either clinical (based on symptoms) or via biopsy during laparoscopy, as in this patient. Endometriosis is typically a benign condition and does not require further imaging (eg, CT scan) for evaluation or treatment.

(Choice C) GnRH agonists (eg, leuprolide) can treat symptomatic endometriosis by acting on the pituitary to decrease pulsatile FSH and LH release, thereby decreasing stimulation of ectopic implants and relieving pain. However, they are not recommended for asymptomatic patients because the adverse side effects (eg, decreased bone density from hypoestrogenism) outweigh the benefits.

(Choice E) Surgical resection of endometriosis may reduce pain and improve fertility in symptomatic patients, but is not recommended for asymptomatic patients due to unnecessary surgical risk.

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Educational objective:
Endometriosis is the ectopic implant of endometrial tissue in the abdomen and pelvis, which may cause chronic inflammation, pain, and fibrosis. Indications for treatment include chronic pelvic pain, dysmenorrhea, dyspareunia, and infertility. Patients with asymptomatic endometriosis require observation and reassurance only.

References

- Clinical presentation of endometriosis identified at interval laparoscopic tubal sterilization: prospective series of 465 cases.
- Introduction: management of endometriosis: moving toward a problem-oriented and patient-centered approach.

Obstetrics & Gynecology	Female Reproductive System & Breast	Endometriosis
Subject	System	Topic

A 28-year-old woman comes to the office due to discomfort during urination for the past 3 months. Antibiotics for a urinary tract infection were prescribed at an urgent care center a few weeks ago, but symptoms have persisted despite treatment. The patient has also noticed increasing pain with the passage of stool for the last year, particularly during menses. Bowel movements occur daily and are soft and not watery. Her symptoms have not improved with the elimination of caffeine and alcohol or an increase in dietary fiber. The patient has also had intermittent abdominal pain for the past 7 months. She takes no daily medications and has had no surgeries. BMI is 19 kg/m^2. Examination shows suprapubic tenderness and an immobile, retroverted uterus. Rectovaginal examination reveals nodularity in the posterior cul-de-sac. Urinalysis and urine culture are normal. Surgical biopsy of the pelvic nodules would most likely show which of the following?

A. Colorectal hamartoma
B. Endometrial glands and stroma
C. Endometrial intraepithelial neoplasia
D. Invasive urothelial carcinoma
E. Serous epithelial ovarian carcinoma
F. Uterine myometrium

Submit

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- A. Colorectal hamartoma (1%)
- ✓ B. Endometrial glands and stroma (86%)
- C. Endometrial intraepithelial neoplasia (1%)
- D. Invasive urothelial carcinoma (2%)
- E. Serous epithelial ovarian carcinoma (0%)
- F. Uterine myometrium (8%)

Omitted
Correct answer
B

86%
Answered correctly

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Time Spent

02/19/2020
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Explanation

Endometriosis	
Pathogenesis	• Ectopic implantation of endometrial glands
Clinical features	• Dyspareunia • Dysmenorrhea • Chronic pelvic pain • Infertility • Dyschezia
Physical examination	• Immobile uterus • Cervical motion tenderness • Adnexal mass • Rectovaginal septum, posterior cul-de-sac, uterosacral ligament nodules
Diagnosis	• Direct visualization & surgical biopsy
Treatment	• Medical (oral contraceptives, NSAIDs) • Surgical resection

NSAIDs = nonsteroidal anti-inflammatory drugs.

Endometriosis affects women of reproductive age and is characterized by the **ectopic implantation of endometrial glands and stroma**, causing chronic pelvic pain. Symptoms and examination findings vary, depending on the specific location of endometriotic implants.

Dysuria or suprapubic tenderness and **dyschezia** (pain with defecation) can be caused by implants on the bladder and rectovaginal septum, respectively. Bowel symptoms commonly worsen with menses. **Rectovaginal nodularity** is highly characteristic of endometrial implants and fibrosis of the posterior cul-de-sac. The uterus is often immobile and fixed in a retroverted position due to scarring from continued cyclic shedding of ectopic endometrial tissue that has no outlet. Other common clinical features include an adnexal mass (endometrioma) and cervical motion

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Definitive diagnosis of endometriosis is by direct visualization with biopsy during surgical exploration, typically laparoscopy. Treatment is surgical removal of visible lesions and lysis of fibrotic tissue, but recurrence is common. Conservative treatment includes oral contraceptives and nonsteroidal anti-inflammatory drugs.

(Choice A) Colorectal hamartomas, typically benign colonic tumors, may cause abdominal pain due to mass effect; however, hamartomas do not worsen with menses or cause pelvic inflammation (eg, immobile uterus).

(Choice C) Endometrial intraepithelial neoplasia, atypical overgrowth of the intrauterine endometrial lining, typically occurs in women with risk factors (eg, obesity, chronic anovulation). Patients typically have abnormal uterine bleeding or postmenopausal bleeding.

(Choice D) Invasive urothelial carcinoma can cause dysuria, but patients typically have painless hematuria; this patient's urinalysis is normal, making this diagnosis unlikely.

(Choice E) Serous epithelial ovarian carcinoma can cause abdominal pain, but the typical presentation is bloating or ascites in a postmenopausal patient with an adnexal mass.

(Choice F) Leiomyoma (ie, fibroids), benign tumors of uterine myometrium, may cause abdominal pain and urinary or bowel symptoms due to mass effect; however, symptomatic patients typically have an irregularly enlarged uterus, making this diagnosis less likely.

Educational objective:
Endometriosis is ectopic implants of endometrial glands and stroma in the abdominopelvic cavity. Symptoms are based on implant location. Bladder implants may cause suprapubic tenderness and dysuria. Rectovaginal implants may cause dyschezia, rectovaginal nodularity, and pelvic fibrosis, as evidenced by an immobile uterus on examination.

References

- Clinical practice. Endometriosis

Definitive diagnosis of endometriosis is by direct visualization with biopsy during surgical exploration, typically laparoscopy. Treatment is surgical

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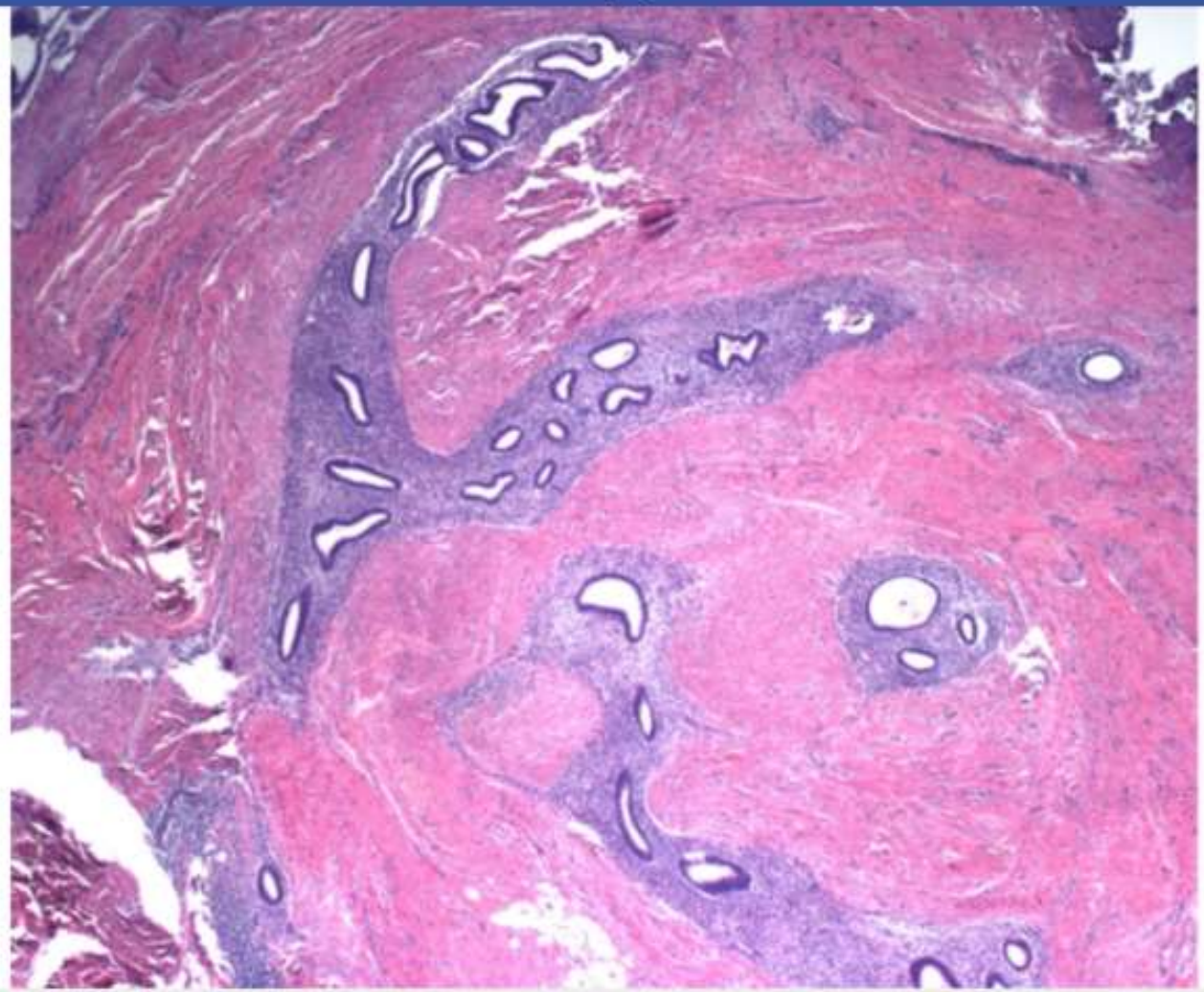

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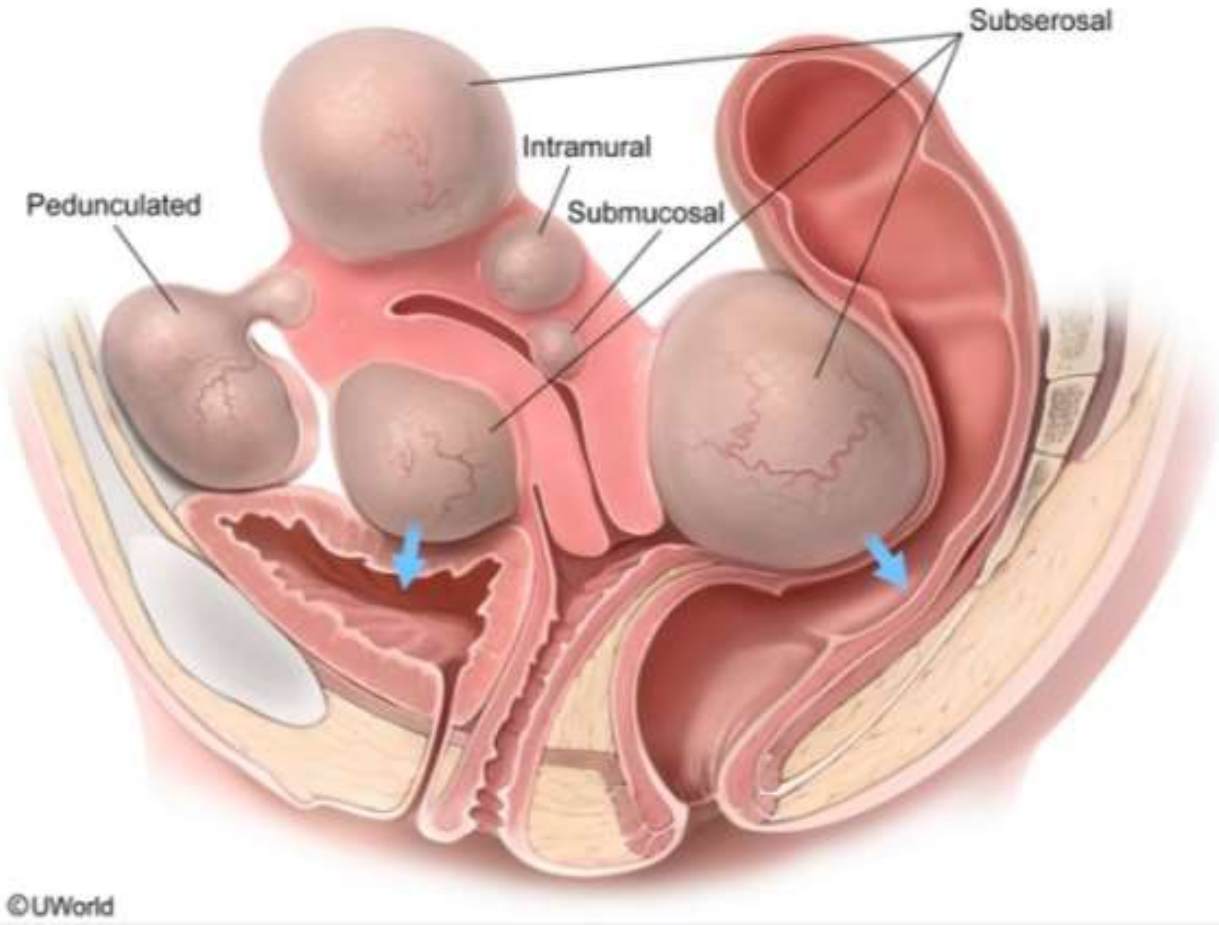
Uterine fibroids



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