Pelvic Organ Prolapse

Topic- based Uworld Questions

Block 1, 2, 7, 8

A 46-year-old woman comes to the office for evaluation of a vaginal mass. The patient has had intermittent vaginal pressure for the past 2 years that is now constant and worse with intercourse. She now notices a vaginal mass when voiding and sometimes sees light blood on the toilet paper after wiping. The patient has no chronic medical conditions. Her only surgery was a cervical conization 4 years ago; repeat Pap testing has since been normal. The patient had 3 uncomplicated vaginal deliveries in her 20s and a tubal ligation with her last delivery. She is recently divorced and has had 3 new sexual partners in the past year. The patient smokes a half pack of cigarettes daily and drinks 1-2 glasses of wine on the weekends. BMI is 23 kg/m^2. Vital signs are normal. On pelvic examination, there is a small erosion over the anterior vaginal wall but no lesions on the cervix. The cervix protrudes to the hymenal ring with Valsalva maneuver. The uterus is mobile and nontender, and there is a 2-cm pedunculated fundal uterine fibroid. Which of the following is the most likely contributing factor to this patient's clinical presentation?

- A. Chronic tobacco use
- B. Multiple pregnancies
- C. Number of sexual partners
- D. Prior cervical conization
- E. Uterine leiomyomata

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- A. Chronic tobacco use (6%)
- ✓ B. Multiple pregnancies (68%)
- C. Number of sexual partners (2%)
- D. Prior cervical conization (13%)
- E. Uterine leiomyomata (9%)

Omitted
Correct answer
B

68%
Answered correctly

02 secs
Time Spent

06/06/2020
Last Updated

Explanation

Pelvic organ prolapse	
Definitions	• Anterior prolapse: Bladder (eg, cystocele) • Posterior prolapse: Rectum (eg, rectocele) • Enterocele: Small intestine • Apical prolapse: Uterus, vaginal vault • Procidentia: Complete herniation
Risk factors	• Obesity • Multiparity • Hysterectomy • Menopause
Clinical presentation	• Pelvic pressure • Obstructed voiding • Urinary retention • Urinary urgency/incontinence • Constipation • Fecal urgency/incontinence • Sexual dysfunction
Management	• Weight loss • Pelvic floor muscle training • Pessary • Surgical repair

This patient has apical compartment (uterine) prolapse, a form of **pelvic organ prolapse** (POP). POP is the abnormal herniation of the uterus, bladder, or rectum through the vagina wall due to **weakening of the pelvic floor muscles** (eg, levator ani muscle complex), ligaments, and nerves caused by chronic, **increased intraabdominal pressure** and pelvic floor injury.

This patient has apical compartment (uterine) prolapse, a form of **pelvic organ prolapse** (POP). POP is the abnormal herniation of the uterus, bladder, or rectum through the vagina wall due to **weakening of the pelvic floor muscles** (eg, levator ani muscle complex), ligaments, and nerves caused by chronic, **increased intraabdominal pressure** and pelvic floor injury.

The most common risk factor for POP is **multiparity** because pregnancy causes increased intraabdominal pressure with subsequent pelvic floor weakening and laxity; vaginal deliveries, even if uncomplicated as in this patient, can cause additional microinjury to the pelvic floor muscles and nerves. With increasing age, the herniation can progress, resulting in the development of vaginal pressure or a **vaginal mass** that worsens with Valsalva maneuver (eg, voiding). Some patients (such as this one) can also develop **vaginal erosions** as the prolapsed vaginal wall protrudes past the hymenal ring, rubs against clothing, and becomes denuded and friable (**abnormal vaginal bleeding**).

Treatment of POP includes pelvic floor muscle exercises in combination with either medical (eg, pessary placement) or surgical management.

(Choices A and C) Chronic tobacco use and multiple sexual partners are risk factors for cervical cancer, which can present with vaginal bleeding, particularly in those with prior cervical dysplasia (such as this patient with a prior cervical conization). However, this patient does not have a fungating or friable cervical lesion and has had normal Pap testing since her cervical conization, making this diagnosis less likely.

(Choice D) Cervical conization increases the risk of cervical insufficiency (eg, painless second trimester pregnancy loss) because a portion of the cervix is removed. It does not cause weakening of the pelvic floor muscles associated with POP.

(Choice E) Uterine leiomyomata can cause POP if they are numerous or large enough to weigh down the uterus; however, a 2-cm fibroid is unlikely to cause POP.

Educational objective:
The most common risk factor for pelvic organ prolapse is multiparity because pregnancy causes pelvic floor muscle weakening from chronic, increased intraabdominal pressure and pelvic floor injury.

References

- Pelvic organ prolapse.
- Prevention and management of pelvic organ prolapse.

A 70-year-old woman comes to the office for worsening constipation. The patient has chronic constipation for which she takes over-the-counter fiber supplements and stool softeners; however, for the past 3 months, the patient has had to push 2 fingers into her vagina to defecate. She has had increased bloating but no nausea, diarrhea, or abdominal pain. The patient has 1 son. Medical history includes hypothyroidism and type 2 diabetes mellitus for which she takes levothyroxine and metformin. A colonoscopy last year was normal. BMI is 32 kg/m^2. Vital signs are normal. The abdomen is soft and nontender with normoactive bowel sounds. On rectal examination, the resting sphincter tone is normal and there are no palpable masses. With Valsalva maneuver, the posterior vaginal wall extends outside the hymenal ring. There is no fecal incontinence with Valsalva maneuver. Anocutaneous reflex is intact bilaterally. TSH is 3.9 mU/L and serum hemoglobin A1c is 7.5%. Fecal occult blood testing is negative. Which of the following is the most likely underlying cause of this patient's presentation?

A. Autonomic dysfunction due to neuropathy
B. External anal sphincter dysfunction
C. Levator ani muscle complex injury
D. Overuse of fiber supplementation
E. Subtherapeutic levothyroxine dosing

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A 70-year-old woman comes to the office for worsening constipation. The patient has chronic constipation for which she takes over-the-counter fiber supplements and stool softeners; however, for the past 3 months, the patient has had to push 2 fingers into her vagina to defecate. She has had increased bloating but no nausea, diarrhea, or abdominal pain. The patient has 1 son. Medical history includes hypothyroidism and type 2 diabetes mellitus for which she takes levothyroxine and metformin. A colonoscopy last year was normal. BMI is 32 kg/m^2. Vital signs are normal. The abdomen is soft and nontender with normoactive bowel sounds. On rectal examination, the resting sphincter tone is normal and there are no palpable masses. With Valsalva maneuver, the posterior vaginal wall extends outside the hymenal ring. There is no fecal incontinence with Valsalva maneuver. Anocutaneous reflex is intact bilaterally. TSH is 3.9 mU/L and serum hemoglobin A1c is 7.5%. Fecal occult blood testing is negative. Which of the following is the most likely underlying cause of this patient's presentation?

- A. Autonomic dysfunction due to neuropathy (7%)
- B. External anal sphincter dysfunction (4%)
- ✓ C. Levator ani muscle complex injury (84%)
- D. Overuse of fiber supplementation (2%)
- E. Subtherapeutic levothyroxine dosing (1%)

Omitted
Correct answer
C

84%
Answered correctly

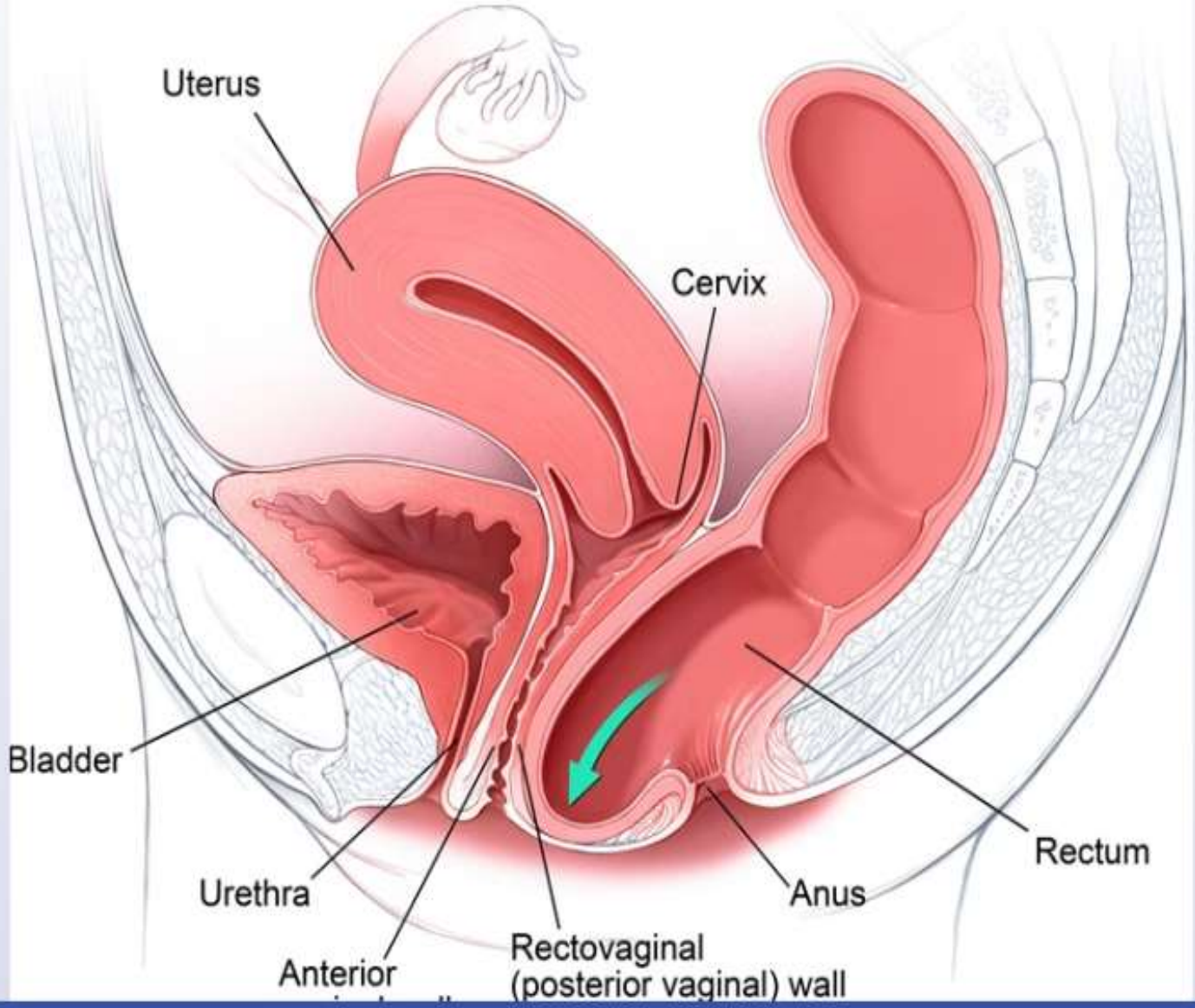
02 secs
Time Spent

06/04/2020
Last Updated

Explanation

Rectocele, prolapse of posterior vaginal wall

Rectocele, prolapse of posterior vaginal wall



This patient's chronic constipation is caused by **pelvic organ prolapse**, the herniation of pelvic organs (eg, bladder, rectum) into the vaginal wall due to **levator ani muscle complex damage**. The levator ani muscle complex forms most of the pelvic floor and functions to hold the pelvic organs in a stable position. When this complex is damaged, such as with **increased intraabdominal pressure** (eg, pregnancy, obesity) or obstetric trauma (eg, forceps-assisted vaginal delivery), there is increased pelvic floor laxity, resulting in decreased pelvic organ support.

The decreased pelvic floor support causes an anatomic change to normal pelvic organ positions; for the rectum, this leads to a change in rectal angle during defecation, which can cause **incomplete defecation** and **constipation**. With accumulation of fecal material, the rectum expands and herniates through the rectovaginal septum, causing prolapse of the rectum into the posterior vaginal wall (ie, rectocele). The prolapse is exacerbated by Valsalva maneuvers (eg, vaginal bulge extending past the hymen while straining), which cause further difficulty with defecation. Therefore, some patients apply digital pressure against the prolapse (ie, **splinting**) to help improve bowel movements. Treatment is with pelvic floor muscle exercises, vaginal pessary placement, or possible surgical correction.

(Choice A) Diabetic autonomic neuropathy can occasionally cause constipation but is more commonly associated with gastroparesis and chronic diarrhea (usually due to decreased rectal sphincter tone). This patient has a normal rectal sphincter tone, making this diagnosis unlikely.

(Choice B) External anal sphincter dysfunction can occur with prior perineal laceration, a common complication of vaginal delivery. In contrast to this patient, those with external anal sphincter dysfunction typically have decreased sphincter tone and anal incontinence (ie, involuntary loss of flatus or fecal material).

(Choice D) Fiber supplementation is used to help treat constipation, and overuse can cause abdominal bloating and flatulence but typically not worsening constipation.

(Choice E) Hypothyroidism can cause chronic constipation; however, this patient's TSH level is normal, making subtherapeutic levothyroxine dosing an unlikely cause of this patient's symptoms.

Educational objective:
Pelvic organ prolapse, the herniation of pelvic organs (eg, rectum) into the vagina, occurs due to damage to the levator ani muscle complex. Patients with prolapse of the posterior vaginal wall (ie, rectocele) classically have chronic constipation and a vaginal bulge.

References

- Functional disorders: rectocele