

A 40-year-old man comes to the emergency department due to worsening right lower abdominal pain that radiates to the right groin area. He has had the pain for the past 7 days, and it is slowly increasing. He also describes fever and anorexia. Two weeks ago, he was treated for furunculosis of the right thigh. The patient has a history of type 1 diabetes mellitus and takes insulin. His temperature is 38.8 C (101.9 F). Abdominal examination shows tenderness on deep palpation in the right lower quadrant without rebound or guarding. No masses are palpated. Bowel sounds are present. Extension of the right hip increases pain, and flexion decreases pain. Rectal examination shows no abnormalities, and skin is normal. Laboratory results are as follows:

Hemoglobin	10.9 g/dL
Leukocytes	13,500/mm ³
Platelets	450,000/mm ³

Which of the following is the best next step in management of this patient?

- ☐ A. Abdominal ultrasonogram
- ☐ B. Abdominal x-ray
- ☐ C. Colonoscopy
- ☐ D. CT scan of abdomen and pelvis
- ☐ E. Laparoscopic appendectomy
- ☐ F. Right hip joint aspiration

Submit

A 40-year-old man comes to the emergency department due to worsening right lower abdominal pain that radiates to the right groin area. He has had the pain for the past 7 days, and it is slowly increasing. He also describes fever and anorexia. Two weeks ago, he was treated for furunculosis of the right thigh. The patient has a history of type 1 diabetes mellitus and takes insulin. His temperature is 38.8 C (101.9 F). Abdominal examination shows tenderness on deep palpation in the right lower quadrant without rebound or guarding. No masses are palpated. Bowel sounds are present. Extension of the right hip increases pain, and flexion decreases pain. Rectal examination shows no abnormalities, and skin is normal. Laboratory results are as follows:

Hemoglobin	10.9 g/dL
Leukocytes	13,500/mm ³
Platelets	450,000/mm ³

Which of the following is the best next step in management of this patient?

- ☐

A. Abdominal ultrasonogram [16%]
- ☐

B. Abdominal x-ray [2%]
- ☐

C. Colonoscopy [0%]
- ☒

D. CT scan of abdomen and pelvis [69%]
- ☐

E. Laparoscopic appendectomy [9%]
- ☐

F. Right hip joint aspiration [4%]

Proceed to Next Item

Explanation:

User Id:

Psoas abscess	
Clinical presentation	<ul style="list-style-type: none">Subacute fever, abdominal/flank pain radiating to groinAnorexia, weight lossAbdominal pain with hip extension (psoas sign)
	<ul style="list-style-type: none">CT scan of the abdomen & pelvis

Explanation:

User Id: [REDACTED]

Psoas abscess	
Clinical presentation	<ul style="list-style-type: none"> • Subacute fever, abdominal/flank pain radiating to groin • Anorexia, weight loss • Abdominal pain with hip extension (psoas sign)
Diagnosis	<ul style="list-style-type: none"> • CT scan of the abdomen & pelvis • Leukocytosis, elevated inflammatory markers • Blood & abscess cultures
Treatment	<ul style="list-style-type: none"> • Drainage • Broad-spectrum antibiotics

©UWorld

This patient with a recent history of skin infection who presents with fever and abdominal pain radiating to the groin likely has a **psoas abscess (PA)**. PA occurs from either hematologic seeding from a distant infection or from direct extension of an intraabdominal infection (eg, diverticulitis, vertebral osteomyelitis). Risk factors include HIV, intravenous drug use, diabetes, and Crohn disease.

PA frequently presents **subacutely** with fever and lower abdominal or flank pain, although symptoms (eg, anorexia, weight loss) can be nonspecific. Consequently, PA should be considered as part of the evaluation for fever of unknown origin. Deep abdominal palpation is required to elicit tenderness due to the location of the psoas on the posterior abdominal wall. The "**psoas sign**," abdominal pain with **hip extension**, can often be detected on examination. Laboratory studies commonly show leukocytosis, thrombocytosis, and elevated inflammatory markers. **CT scans** are required to confirm the **diagnosis**. Drainage is critical, and blood and abscess cultures should be obtained to guide antibiotic therapy.

(Choice A) Ultrasonography typically has poor sensitivity for PA due to abscess location deep in the pelvis, overlying bowel gas, and pelvic bones.

(Choice B) Abdominal x-rays are helpful in identifying bowel obstructions, free air, foreign bodies, and renal calculi, but have much lower sensitivity in identifying PA.

(Choice C) This patient had clear risk factors for PA formation (type 1 diabetes mellitus).

drug use, diabetes, and Crohn disease.

PA frequently presents **subacutely** with fever and lower abdominal or flank pain, although symptoms (eg, anorexia, weight loss) can be nonspecific. Consequently, PA should be considered as part of the evaluation for fever of unknown origin. Deep abdominal palpation is required to elicit tenderness due to the location of the psoas on the posterior abdominal wall. The "**psoas sign**," abdominal pain with **hip extension**, can often be detected on examination. Laboratory studies commonly show leukocytosis, thrombocytosis, and elevated inflammatory markers. **CT scans** are required to confirm the **diagnosis**. Drainage is critical, and blood and abscess cultures should be obtained to guide antibiotic therapy.

(Choice A) Ultrasonography typically has poor sensitivity for PA due to abscess location deep in the pelvis, overlying bowel gas, and pelvic bones.

(Choice B) Abdominal x-rays are helpful in identifying bowel obstructions, free air, foreign bodies, and renal calculi, but have much lower sensitivity in identifying PA.

(Choice C) This patient had clear risk factors for PA formation (type 1 diabetes mellitus, recent furunculosis). In patients with unexplained PA, colonoscopy may help identify a source for the abscess.

(Choice E) Retrocecal appendicitis can cause a positive psoas sign, and in the appropriate setting patients may proceed directly to surgery. However, compared to PA, retrocecal appendicitis is more likely to cause pain on rectal examination and less likely to cause right lower quadrant pain. In addition, the patient's subacute presentation and history of recent soft tissue infection increase the diagnostic uncertainty, making a CT scan the best next step.

(Choice F) Hip septic arthritis can cause fever and groin pain. However, the pain is typically worsened by flexion, and there are frequently signs of inflammation, such as erythema and warmth overlying the joint, on examination.

Educational objective:

Psoas abscess commonly presents subacutely with fever and lower abdominal or flank pain radiating to the groin. The "psoas sign," abdominal pain with hip extension, can often be detected on examination. CT scans are required to confirm the diagnosis, and drainage with antibiotics is the mainstay of therapy.

References:

1. [Iliopsoas abscesses.](#)

Media Exhibit

