

A healthy 35-year-old man comes to the emergency department with severe abdominal pain for the last 4 hours. The pain started in the periumbilical area but has now shifted to the right lower quadrant. He also complains of nausea and 2 episodes of vomiting. He has no history of other medical problems and takes no medications. The patient's temperature is 38.9 C (102 F), blood pressure is 125/80 mm Hg, pulse is 100/min, and respirations are 20/min. Abdominal examination shows tenderness in the right lower quadrant that does not worsen with inspiration. Palpation of the left lower quadrant produces pain in the right lower quadrant. Urinalysis is normal. Laboratory results are as follows:

White blood cells	16,000/ μ L
Hematocrit	42%
Platelet count	220,000/ μ L
Leukocytes	
Neutrophils	86%
Eosinophils	2%
Lymphocytes	8%
Monocytes	4%

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

- ☐ A. Bowel rest with intravenous antibiotics
- ☐ B. Colonoscopy
- ☐ C. Computed tomography scan of the abdomen
- ☐ D. Laparoscopic appendectomy
- ☐ E. Ultrasound of the abdomen

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

- ☐ A. Bowel rest with intravenous antibiotics [3%]
- ☐ B. Colonoscopy [0%]
- ☐ C. Computed tomography scan of the abdomen [18%]
- ☒ D. Laparoscopic appendectomy [67%]
- ☐ E. Ultrasound of the abdomen [11%]

Proceed to Next Item

Explanation:

User Id: [REDACTED]

This patient with migratory right lower quadrant (RLQ) pain, nausea, vomiting, fever, and leukocytosis has features consistent with acute appendicitis. Appendicitis typically begins as a vague periumbilical visceral pain caused by stretching of the appendiceal

[Proceed to Next Item](#)**Explanation:**User Id: 

This patient with migratory right lower quadrant (RLQ) pain, nausea, vomiting, fever, and leukocytosis has features consistent with acute appendicitis. Appendicitis typically begins as a vague periumbilical visceral pain caused by stretching of the appendiceal wall. Eventually the peritoneum becomes inflamed and the pain becomes sharp and localizes to the RLQ. Patients typically will have pain with palpation at **McBurney point** in the RLQ and Rovsing sign (RLQ pain with deep palpation of the LLQ). Laboratory studies can show leukocytosis but may be normal.

Diagnosis based on classic clinical and laboratory features of appendicitis, as in this patient, is highly specific. It does not warrant further imaging before surgery as this may delay treatment and lead to complications, including perforation. However, patients who do not have the typical features of appendicitis or those with other possible causes of RLQ pain (eg, diverticulitis, ileitis, inflammatory bowel disease) should have appropriate imaging with computed tomography or ultrasonography (**Choices C and E**) to confirm the diagnosis.

(Choice A) Antibiotics should be given preoperatively to all patients and should be continued postoperatively for those with appendiceal rupture. Patients with appendicitis who have had symptoms for >5 days usually have a phlegmon with an abscess that has walled off. These patients can be managed conservatively with intravenous antibiotics, bowel rest, and delayed appendectomy weeks later.

(Choice B) Colonoscopy is not indicated in the management of acute appendicitis but would be useful for other diagnoses such as inflammatory bowel disease. Findings that would warrant colonoscopy include gross gastrointestinal bleeding, diffuse inflammatory changes of the bowel wall on imaging, or negative findings at the appendix on laparoscopy.

Educational objective:

Acute appendicitis is a clinical diagnosis, and patients with a classic presentation (migratory pain, nausea, vomiting, fever, leukocytosis, McBurney point tenderness, and Rovsing sign) should have an immediate appendectomy to prevent appendiceal rupture. Imaging studies such as computed tomography and ultrasound are useful for patients with nonclassic symptoms, equivocal findings on initial assessment, or delayed presentation.

References:

1. Computed tomography and ultrasonography do not improve and may

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References:

1. [Computed tomography and ultrasonography do not improve and may delay the diagnosis and treatment of acute appendicitis.](#)
2. [A prospective randomized study of clinical assessment versus computed tomography for the diagnosis of acute appendicitis.](#)
3. [Update on imaging for acute appendicitis.](#)