

An 80-year-old man is evaluated for gradually worsening abdominal discomfort and distension for the past 3 days. He also has nausea and has had several episodes of vomiting, with his last bowel movement being 3 days ago. The patient underwent total hip arthroplasty 10 days ago due to a femoral neck fracture and was transferred to a rehabilitation facility for physical therapy. He has received acetaminophen and opioid analgesics for pain control. The patient also has hypertension, hyperlipidemia, coronary artery disease, and systolic heart failure. Temperature is 37.1 C (98.8 F), blood pressure is 110/70 mm Hg, and pulse is 90/min. The patient appears uncomfortable. The abdomen is distended and tympanitic with mild diffuse tenderness and hypoactive bowel sounds. There is no guarding or rebound tenderness. The rectal vault is empty. Laboratory results are as follows:

Complete blood count

Hemoglobin	12.6 g/dL
Platelets	240,000/mm <sup>3</sup>
Leukocytes	8,200/mm <sup>3</sup>

Serum chemistry

Sodium	136 mEq/L
Potassium	3.1 mEq/L
Blood urea nitrogen	18 mg/dL
Creatinine	0.9 mg/dL
Calcium	8.8 mg/dL
Glucose	120 mg/dL

Abdominal CT scan reveals a dilated colon from the cecum to the splenic flexure. Oral contrast is visualized up to the distal colon. Which of the following is the most likely diagnosis for this patient?

- ☐ A. Acute infectious colitis
- ☐ B. Acute ischemic colitis
- ☐ C. Cecal volvulus
- ☐ D. Colonic pseudo-obstruction
- ☐ E. Opioid-induced constipation



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- ☐ F. Postoperative ileus
- ☐ G. Toxic megacolon



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- ☐ A. Acute infectious colitis [0%]
- ☐ B. Acute ischemic colitis [8%]
- ☐ C. Cecal volvulus [7%]
- ☒ D. Colonic pseudo-obstruction [34%]
- ☐ E. Opioid-induced constipation [31%]



- ☐ B. Acute ischemic colitis [8%]
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- ☒ D. Colonic pseudo-obstruction [34%]
- ☐ E. Opioid-induced constipation [31%]
- ☐ F. Postoperative ileus [17%]
- ☐ G. Toxic megacolon [3%]

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Explanation:

User Id: 

Acute colonic pseudo-obstruction (Ogilvie syndrome)	
Etiology	<ul style="list-style-type: none"><li>• Nonoperative trauma</li><li>• Infection (eg, pneumonia)</li><li>• Cardiac (eg, heart failure, myocardial infarction)</li><li>• Abdominal/pelvic/orthopedic surgery</li><li>• Neurologic (eg, Parkinson disease, multiple sclerosis, Alzheimer disease)</li></ul>
Clinical findings	<ul style="list-style-type: none"><li>• Abdominal distension, pain, nausea, vomiting</li><li>• Constipation/obstipation or paradoxical diarrhea</li><li>• If ischemia/perforation: Guarding, rigidity, extreme tenderness</li><li>• Partial/total colonic dilation without anatomic obstruction on CT scan</li></ul>

This elderly patient who recently underwent a major orthopedic procedure now has abdominal pain, distension, nausea, and vomiting. A CT scan reveals colonic dilation with oral contrast visualized throughout the colon, suggesting no anatomic obstruction. This presentation is characteristic of acute colonic pseudo-obstruction (Ogilvie syndrome).

Acute colonic pseudo-obstruction more commonly occurs in men age >60. Predisposing conditions include nonoperative trauma, severe illness, and surgery, particularly in combination with metabolic abnormalities (eg, hypokalemia) or medication administration (eg, opioids). Postoperative Ogilvie syndrome tends to present 3-7 days after surgery. The underlying mechanism is likely related to interruption of the autonomic nervous



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Acute colonic pseudo-obstruction more commonly occurs in **men age >60**. Predisposing conditions include **nonoperative trauma**, severe illness, and **surgery**, particularly in combination with metabolic abnormalities (eg, hypokalemia) or medication administration (eg, opioids). Postoperative Ogilvie syndrome tends to present **3-7 days** after surgery. The underlying mechanism is likely related to interruption of the autonomic nervous system, possibly due to anesthesia, analgesia, or surgical trauma. As a result, colonic dilation occurs, usually involving the cecum and ascending colon, although the entire colon may be involved. Increasing colonic dilation increases the risk of colonic ischemia and perforation.

Diagnosis is confirmed with an abdominal CT scan as plain abdominal radiographs lack specificity.

**(Choices A and G)** Acute infectious colitis is likely to cause diarrhea, often with fever and leukocytosis, none of which are seen in this patient. Toxic megacolon is a potentially fatal complication of inflammatory or infectious (eg, *Clostridium difficile*) colitis that results in pathologic dilation of the colon. It is frequently marked by systemic toxicity (eg, fever, hypotension, leukocytosis) and preceded by manifestations of colitis (eg, diarrhea).

**(Choice B)** Acute ischemic colitis can occur postoperatively but is more commonly associated with vascular surgeries. It presents with moderate abdominal cramping, hematochezia, and occasionally leukocytosis and lactic acidosis.

**(Choice C)** Cecal volvulus is a mechanical obstruction from torsion of a mobile cecum and ascending colon. It can be easily visualized on an **abdominal radiograph** or CT scan. Most patients experience progressive abdominal pain with episodes of cramping.

**(Choices E and F)** Opioid analgesia is a common culprit in postoperative constipation but is unlikely to cause asymmetric colonic dilation or an empty rectal vault. Postoperative ileus can occur following any operation and results in uncoordinated intestinal motility and obstipation. Although symptoms may be similar to those of acute colonic pseudo-obstruction, postoperative ileus would not cause severe colonic dilation and usually develops before a return of bowel function (making it unlikely in this patient who had bowel movements after surgery).

#### Educational objective:



(eg, opioids). Postoperative Ogilvie syndrome tends to present **3-7 days** after surgery. The underlying mechanism is likely related to interruption of the autonomic nervous system, possibly due to anesthesia, analgesia, or surgical trauma. As a result, colonic dilation occurs, usually involving the cecum and ascending colon, although the entire colon may be involved. Increasing colonic dilation increases the risk of colonic ischemia and perforation.

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Acute colonic pseudo-obstruction (Ogilvie syndrome) is an uncommon postoperative complication characterized by abdominal pain, distension, and colonic dilation without radiographic evidence of an anatomic obstruction. Progressive colonic dilation can lead to colonic ischemia and perforation. Abdominal CT scan is the diagnostic test of choice.

#### References:

1. **Acute colonic pseudo-obstruction.**



Media Exhibit

