A 50-year-old male with a past medical history of constipation presented to the emergency department complaining of two days of abdominal pain, bloating and constipation. The pain was localized to the left lower quadrant. Although he denied any fever or chills, he noted intermittent nausea, associated with oral intake. He stated that he had not had a bowel movement in three days.

The patient had a colonoscopy and polypectomy one month prior to admission. However, the procedure was not completed due to inadequate prep and thus, the cecum was not visualized. The patient then received a barium enema three days prior to presentation.

On presentation, the patient was in obvious discomfort. Vital signs were within normal limits. His abdomen was soft with normal bowel sounds, but mildly distended with a palpable mass in the left lower quadrant. Rectal examination revealed a hard mass 3 cm above the anal verge. An abdominal radiograph was then performed (Figure 1).

Questions
1. What is the diagnosis?
2. What might have been done to preempt this occurrence?
ANSWERS AND DISCUSSION

An x-ray of the abdomen revealed retained contrast through the large bowel and massively dilated contrast filled rectum. The patient was manually disimpacted and given several tap water enemas. After the patient had several bowel movements and improved symptomatically he was discharged for an outpatient follow-up with his gastroenterologist.

Although less sensitive to smaller lesions than colonoscopy, barium enema is a recognized screening tool for colon cancer as well as an alternative colon-imaging test and is reasonable in the setting of a failed colonoscopy. Winawer, et al noted that barium enema detected 39% of all adenomas found on colonoscopy and 47.8% of adenomas greater than 1 cm (1). Chong, et al reported that after failed colonoscopy, barium enemas had an additional diagnostic yield of 3.2% for adenomas greater than 1 cm in the area of the colon not visualized during colonoscopy, and Heagenthau et al. reported an 18% yield in all neoplastic lesions (2,3).

Complications of barium enemas, though rare, include perforation, barium impaction, water intoxication, allergic reactions, and cardiac arrhythmias. Vora and Chapman report 2 cases of impaction after 348,433 barium examinations (1/175,000 enemas). Factors that may contribute to impaction are slow transient time, colonic inertia and dehydration. Thus, impaction can usually be preempted if patients are encouraged to maintain their oral fluid intake and in those with a history of constipation, employ a mild laxative after examination until the barium has been removed from the bowel (4). Methods such as gastrografin have been employed to relieve barium impaction (5). Our patient’s pain and constipation resolved with serial tap water enemas. This case may underscore the caution necessary in prescribing barium enemas for patients who have a history of constipation.

References