An 82-year-old man with diabetes mellitus who had undergone a total hip replacement 10 years earlier presented to the emergency department with the acute onset of pain in the left hip and groin and a fever (temperature, 39.2°C). On presentation, the blood pressure was 96/57 mm Hg, and the white-cell count was 12,400 per cubic milliliter. A radiograph and subsequent computed tomographic scan of the hip (Panels A and B, respectively) showed free air extending lateral to the greater trochanter and superior to the acetabular component. Broad-spectrum antibiotic therapy was initiated, and the patient underwent emergency surgical débridement with removal of the acetabular component; intra-articular cultures grew Clostridium septicum. The infection was successfully treated with 6 weeks of antibiotic therapy (ultimately narrowed to penicillin G on the basis of sensitivities), placement of an articulating cement spacer, and serial débriements. Because C. septicum infection has a known association with colorectal cancer, a colonoscopy was performed after the resolution of the acute illness, which revealed a fungating mass 6 cm in diameter in the ascending colon (Panel C). Pathological findings showed adenocarcinoma, and further evaluation revealed no metastatic disease. The patient underwent a hemicolectomy and is recovering well.

DOI: 10.1056/NEJMicm1400498
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