A case of cancer of the ascending colon perforated by barium enema examination

Emi Yamaguchi, Makoto Koike, Takafumi Oe, Takeshi Nishi, Yoshitoshi Sato, Yasuhito Kitakado, Kenji Takubo
Department of Surgery, Matsue Red Cross hospital

Gastrointestinal perforation is a risk during lower gastrointestinal endoscopy and enema examination, and despite taking great care during pretreatment and examination, we encountered a patient who developed cancer perforation during enema examination that was not predicted by endoscopic examination. The patient was a man in his 60s who was receiving insulin treatment for diabetes. During lower gastrointestinal endoscopy to investigate a positive fecal occult blood test, a type 2 tumor approximately 2 cm in size was observed in the ascending colon. PET-CT revealed FDG accumulation in the same location. There were no accumulations suggestive of distant metastasis. A barium enema was performed, but was halted because of the patient’s discomfort. Although there was no obvious leakage of contrast agent, the ascending colon could be dilated poorly. The patient’s symptoms did not improve, and X-rays taken when he was admitted to the hospital for observation showed a large amount of intraperitoneal free gas, while CT revealed leakage of contrast agent outside the gastrointestinal tract. Colorectal perforation was diagnosed and an emergency laparotomy was performed. A large amount of leaked contrast agent was present in the abdominopelvic cavity, and there was a perforation 2 mm in diameter in the ascending colon, with a palpable small mass in the same location. Cancer perforation of the ascending colon was diagnosed, and right hemicolectomy with lymph node dissection and protective ileostomy were performed. The pathological diagnosis was of a type 2 (>3) tumor comprised of well to moderately differentiated adenocarcinoma extending beyond the serosa, with no lymph node metastasis, minimal lymphatic invasion and minimal venous invasion. The patient is currently undergoing postoperative adjuvant chemotherapy as an outpatient. We report this case to reemphasize the need for attention to the risk of enema perforation, even in cases of small tumors.