Background: Restorative proctocolectomy with hand-sewn ileoanal anastomosis and mucosectomy is warranted in patients with dysplasia and/or cancer on ulcerative colitis to prevent subsequent neoplastic changes in the retained mucosa. However, complete excision of the colonic mucosa cannot be obtained reliably. We report a case of anal canal adenocarcinoma after handsewn anastomosis with mucosectomy. Methods: A 47-year-old patient, previously submitted to ileorectal anastomosis for colonic cancer on ulcerative colitis, underwent completion proctectomy and handsewn ileoanal anastomosis with mucosectomy for recurrent anastomotic cancer. Two years later, we submitted the patient to pouch removal with permanent ileostomy for a mucinous adenocarcinoma of the anal canal (T2N2Mx) found at follow-up pouch endoscopy. Conclusions: Only four cases of adenocarcinoma after handsewn anastomosis have been reported in the literature. This new case we report confirms that the risk of malignancy after ileoanal anastomosis with mucosectomy, although small, is real, despite the surgeon taking care with this particular step of the procedure. Careful surveillance is needed in patients with surgical treatment for long-term ulcerative colitis or dysplasia. [Key words: Adenocarcinoma; Ulcerative colitis; Dysplasia; Ileoanal anastomosis]


Restorative proctocolectomy with ileal pouch-anal anastomosis (IPAA) has been worldwide accepted as the first choice procedure for the treatment of ulcerative colitis (UC) and familial adenomatous polyposis. The original technique has been modified progressively, mostly by the introduction of the stapled technique, which has shortened the duration of the procedure and reduced the complication rate. Indeed, with this technique the lengthy time for mucosectomy can be avoided. However, concerns have been raised, because in these cases colonic mucosa is left in situ with potential risk of flare-up of the proctitis and, overall, of neoplastic degeneration. On the other hand, despite the care the surgeon may take with this particular step of the procedure, even mucosectomy does not allow complete removal of columnar epithelium, with its potential evolution. We report a case of adenocarcinoma arising in the anal canal after a handsewn (HS) ileoanal anastomosis with mucosectomy for UC.

Report of a Case

In 1997 a 46-year-old male was referred to our department. He had been diagnosed as having UC when he was 26 years old and had been treated with sulfasalazine with satisfactory response and no need for prolonged steroid therapy. In addition, he was diagnosed as having primary sclerosing cholangitis (PSC) by endoscopic retrograde cholangiography when he was 42 years old.

In 1994 a malignant polypoid lesion at the level of transverse colon had been found at surveillance endoscopy. The patient had been then submitted elsewhere to subtotal colectomy with handsewn ileorectal anastomosis. The histologic examination confirmed the presence of poorly differentiated mucinous carcinoma on UC with full-thickness infiltration of the bowel wall (T3N1Mx) and multifocal low-grade and high-grade dysplasia. Subsequent adjuvant chemotherapy with 5-fluorouracil had to be interrupted because of intolerance.

Three years after surgery, an ulcerous lesion at the
level of the anastomosis had been found at surveillance endoscopy. Biopsies specimens taken from the lesion were reported as an infiltrating adenocarcinoma. For this reason, we submitted the patient to completion proctectomy with mucosectomy, construction of ileal J-pouch, and HS ileoanal anastomosis. The histologic examination showed a moderately differentiated adenocarcinoma infiltrating the wall up to muscularis propria (T2N0Mx). No postoperative chemotherapy was given at this time.

After surgery, the patient developed an ileoanal stenosis, first treated with gentle finger dilation. The anastomotic stenosis persisted in the first year after surgery and was successively treated by the patient himself using progressively enlarged Hegar’s dilators® (MARTIN, Medzin-Technik, Tuttingen, Germany), with an acceptable quality of life. Finally, the stenosis became less responsive to mechanical dilations.

A pouch endoscopy was then undertaken and a small polypoid growth was found in the anal canal below the ileal pouch-anal anastomosis; biopsies specimens were taken and reported as a well-differentiated adenocarcinoma developed on villous adenoma. The patient was admitted to our department in March 1999. The pouch together with anal canal and perirectal tissues was excised by a combined abdominal and perineal approach; a permanent Brooke ileostomy was then constructed (Fig. 1). The histologic examination of the specimen reported a colonic mucinous adenocarcinoma, poorly differentiated, infiltrating the bowel wall full thickness up to the perirectal fat. In addition, the presence of lymph node metastasis with neoplastic thrombosis was found (T2N2Mx; Fig. 2 A and B).

Subsequently, the patient was submitted to adjuvant radiation (totaling 5,040 cGy) and chemotherapy with oxaliplatinum plus fluorofolate (8 courses). He was reviewed regularly with physical examination, carcinoembryonic antigen estimation, and CT scan. At 12 months after abdominoperineal resection, the patient was doing well, with no evidence of recurrent disease.

**DISCUSSION**

Only five cases of adenocarcinoma developing after IPAA for UC have been reported to date. In four cases cancer arose in patients submitted to mucosectomy and HS ileoanal anastomosis; one of them had a squamous-cell carcinoma arising from the anal canal. In one case cancer developed in the anal canal after restorative proctocolectomy with stapled ileal pouch-anal anastomosis. These data, however, represent only an anecdotal confirmation of the existence of cancer risk even with a few centimeters of colonic mucosa left in place. The main consideration here is that our patient was a “high risk” one because of