Laparoscopic Restorative Proctocolectomy in Adenomatus Patients

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Dear Editor,

I read with great interest the series presented by Bananza-deh et al. (1). This series includes a group of 19 patients who underwent laparoscopic restorative proctocolectomy (RPC) without ileostomy, performed by the same surgeon, to treat Familial Adenomatous Polyposis (FAP) between October 2008 and May 2011. Ileal pouch-anal anastomosis (IPAA) is currently the standard surgical alternative for the majority of ulcerative colitis (UC) and FAP patients. Despite the complexity of the operation, IPAA is safe (mortality: 0.5–1%) and carries an acceptable risk of non-life-threatening complications (10–25%), achieving good long-term functional outcomes with excellent patient satisfaction (over 95%). During the last decade, the surgical technique has evolved significantly, mainly due to the growing incorporation of laparoscopic approaches. Because it is a complex technical procedure, a temporary ileostomy proximal to the ileal pouch has typically been performed (2). Thus, the most controversial aspect of the study discussed here being the omission of ileostomy for a series of laparoscopic surgeries. A protective ileostomy may reduce anastomosis leakage, prevent pelvic sepsis and fistulization, thus preserving pouch function. Consequently, it should also prevent the need for re-laparotomy and most importantly, pouch failure. The rationale for this decision is based on the fact that a protective ileostomy may limit the severity of septic complications, as the prevalence of pouch-related septic complications varies between 6% and 37% (2). Furthermore, most patients are able to accept this temporary stoma well, although it may be a source of complications after its construction or closure. These complications may include dehydration and metabolic disorders, peristomal irritation, anastomotic fistula, intestinal obstruction, and others (3).

Although a protective ileostomy is still performed in the vast majority of series, its omission is associated with a similar rate of septic complications and may also provide economic advantages for select patients. By avoiding an ileostomy, the surgeon should prevent potential associated problems such as high output and complications of the stoma and its closure. Selection criteria for this choice should exclude clinical factors (high doses of steroids, malnutrition, toxicity or anemia) and technical factors (difficult procedures with intraoperative complications). Furthermore, surgeons must be sure that the ileoanal anastomosis is tension-free, that it is supplied with adequate blood flow, that the tissue rings are intact and that there are no air leaks (3, 4). Within this context, a German group studied 706 consecutive patients (494 UC, 212 FAP) in an attempt to identify subgroups of patients who were at high risk for pouch-relat-
In an attempt to better identify patients who may be candidates for ileostomy omission during RPC, the group from St Marks Hospital in London reviewed 4013 operations performed between 1977 and 2005 (10). Proximal diversion was performed in 3196 of 3733 patients (85.6%). With the help of logistic regression analysis, the independent factors favoring omission of ileostomy were: stapled anastomosis (odds ratio [OR], 6.4), no preoperative corticosteroid use (OR, 3.2), familial adenomatous polyposis diagnosis (OR, 2.6), cancer diagnosis (OR, 3.4), female gender (OR, 1.6) and age at surgery younger than 26 (OR, 2.1) (P < 0.01 for all). Omission of proximal diversion demonstrated no significant effect on postoperative adverse events, although it was associated with a 2-day increase in the median length of hospital stay (P < 0.01). However, its safety is controversial. While there are articles showing that the omission of temporary ileal diversion has a relatively low complication rate and provides excellent fecal control, others state that RPC without diversion is not as safe as RPC with diversion, especially in patients taking more than 20 mg of prednisone/day (11). In other UC patient series, one-stage restorative proctocolectomy without a defunctioning ileostomy was associated with an increased risk of death, which is the reason its routine use should not be recommended (12).

In another recent paper from Saint Antoine Hospital (13), the authors reported their experience with 71 patients (38 females) who underwent laparoscopic RPC between November 2004 and February 2010. Indications were FAP (34), UC (35), indeterminate colitis (1) and Lynch syndrome (1). Laparoscopic RPC was performed as a one-stage procedure in 49 patients, and after a sub-total colectomy in 22. Seven patients in each group underwent the formation of a diverting stoma. Sixteen patients experienced at least one postoperative complication. The postoperative morbidity was 28% (n = 4/14) and 21% (n = 12/21) in patients with and without a stoma (P = 0.8), and the rate of fistula was 21% and 5%, respectively (P = 0.08). Seven percent of patients with a stoma and 16% without a stoma had intra-abdominal fluid collection (P = 0.7). Nine patients required reoperation, which was not influenced by the presence or absence of a diverting stoma. The results of this study are similar those of other laparoscopic RPC series.

Thus, the data from the literature presented here support the idea that an ileostomy may be safely omitted in select patients, especially FAP. First, IPAA complications are generally less common in FAP than in UC (14). At diagnosis, FAP patients usually present with few symptoms and good general condition, a different picture from those suffering from UC. And when comparing septic complications with and without ileostomy, most cases were attributed to steroid use (11). The French group from Saint Antoine reported a 4% rate of septic complications in FAP compared with 6% in UC in two series of unselected consecutive patients undergoing IPAA with ileostomy (16). Other comparative studies have also shown higher rates of septic complications without ileostomy, but the risk of secondary ileostomy has
remained below 6%. However, it is important to note that revision surgery may be necessary only in cases of disseminated peritoneal infection, and less severe cases may be controlled with antibiotics. In the series reported by Cohen et al. (15), 18% of the 71 patients without ileostomy developed an anastomotic fistula, but a temporary ileostomy was only required in one (1.4%).

The risk of developing postoperative fertility problems after complications from RPC should not be used to contraindicate procedures without ileostomy. Currently it is well recognized that the risk of fertility problems is not associated with the type of surgery, indication for surgery, complications or other comorbid conditions. Postoperative fertility problems are more common among women who had their first surgical procedure at a younger age (16). The omission of ileostomy may have a great impact on young patients, who usually place a high value on bodily appearance. While large-bowel techniques are evolving rapidly, the selection criteria for omitting an ileostomy after laparoscopic RPC, especially in FAP, still remain to be clarified.

Lopez-Rosaless et al. (17) reported good results in eight out of 10 patients who underwent IPAA without protection. Ky et al. (18) registered 11 postoperative complications and three procedures among 32 one-stage RPC. In our own series, one patient subjected to a one-stage procedure developed a postoperative fistula that was successfully treated with intestinal deviation (19). So far, we have preferred to perform laparoscopic RPC with ileostomy, due to the potential risk of desmoid tumors in FAP, which has been associated with surgical trauma, among other predictive factors.

In this article, Banazadeh et al. (1) described the treatment of 19 patients with a mean age of 34 years (range 22-40 years) who experienced no anastomotic leakage after two weeks post-operation. As hospitalization length after surgery varied from 4 to 7 days, the authors were only able to report complications such as copious diarrhea in 6 patients (30%), and transient fecal incontinence in 2 patients (10%). However, complications from RPC are usually late and a longer follow-up is necessary in this group. By initiating a discussion about the avoidance of ileostomy after RPC, their article achieved their main purpose regarding this important issue. A review of the pertinent literature leads to the conclusion that selective omission of a protective ileostomy may be safe and is associated with similar septic complications and failure rates when compared with stoma patients. However, this finding leads us to critically evaluate FAP patient selection criteria, in which an experienced surgical team, a patient with a good clinical status and a procedure without adverse intraoperative outcomes should be considered.

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F.G.C contributed 100% to prepare this article.

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References