Ileoanal pouches—Is mucosectomy unnecessary?

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Z COHEN. Ileoanal pouches—Is mucosectomy unnecessary? Can J Gastroenterol 1993;7(2):263-265. The current literature indicates that a stapled ileoanal anastomosis is a safe procedure which may lead to a quicker and more easily achievable anastomosis. In our own series, there has been an overall decrease in the leak rate using a stapled anastomosis. The risk of carcinoma in using this type of technique is theoretically greater if an entire mucosectomy has not been performed. However, the only reported cases of carcinoma associated with this procedure have been in those patients who have had a supposed total mucosectomy. Because of the theoretical potential of the development of carcinoma in the residual anal mucosa, it is important to recommend that a stapled anastomosis be carried out only in selected individuals showing no evidence of dysplasia and in those patients with familial polyposis. If a stapled anastomosis is to be used, careful long term follow-up is required to ensure that, if dysplasia occurs in the residual anorectal mucosa, it will be diagnosed at an early stage.

Key Words: Ileoanal anastomosis, Mucosectomy, Pelvic pouch procedure, Ulcerative colitis

Réservoir iléo-anal — la résection de la muqueuse est-elle superflue?

RÉSUMÉ: Selon la littérature actuelle, l’anastomose du réservoir iléo-anal avec agrafes est une intervention sûre qui peut amener une anastomose plus rapide et plus facile. Dans notre série, nous avons noté une diminution globale du taux d’incontinence suite à une anastomose avec agrafes. Le risque de cancer associé à ce type d’intervention est théoriquement plus élevé si la mucosectomie est partielle. Les seuls cas de cancer déclarés liés à cette intervention sont cependant survenus chez les patients supposés avoir reçu une mucosectomie totale. A cause du risque de cancer potentiel lié aux portions restantes de muqueuse anale, il est important de recommander une anastomose avec agrafes seulement chez des patients sélectionnés qui ne présentent aucun signe de dysplasie que chez les patients atteints de polyposis familiale. Si l’anastomose avec agrafes est utilisée, il faut opérer un suivi à long terme, pour s’assurer que la dysplasie soit diagnostiquée tôt, au cas où elle surviendrait au niveau de la muqueuse anorectale résiduelle.

THE PELVIC POUCH PROCEDURE IS our procedure of choice for most patients with ulcerative colitis. Initially, it was shown that it is not necessary to leave a lengthy rectal cuff in order to achieve a good functional result (1). The present practice is to leave only a 1 to 2 cm anal cuff and perform either a complete mucosectomy with a hand-sewn ileoanal anastomosis or a stapled ileoanal anastomosis leaving the anal transitional zone as well as some anal mucosa. The controversy under consideration is whether a mucosectomy is necessary or not. The factors to be considered are: the functional result of a hand-sewn versus a stapled anastomosis; the leak rate of a hand-sewn versus a stapled anastomosis; the risk of developing carcinoma in residual anorectal mucosa; the relationship between residual mucosa and the development of pouchitis.

FUNCTIONAL RESULTS

In 1987, Johnston et al (2) compared 24 cases of hand-sewn anastomosis with a complete mucosectomy versus 12 cases with a stapled anastomosis leaving the anal transitional zone. It was demonstrated that the resting anal pressure was significantly decreased in patients undergoing hand-sewn versus stapled anastomosis. In ad-
condition, soiling occurred in 10 of 24 patients undergoing hand-sewn anastomosis versus only one of 12 patients with a stapled anastomosis. It was concluded that a stapled anastomosis achieved a better functional result.

Bartolo et al (3) also compared hand-sewn versus stapled anastomosis and showed that there was improved anal sensation with preservation of the anal transitional zone and that soiling was possibly improved with the stapled anastomosis, but there was no change in the frequency of bowel movements despite the fact that electorsensitivity of the area was preserved. Williams et al (4) described function after ileal stapled pouch-anal anastomosis for ulcerative colitis and concluded that night evacuation was decreased and that it was quicker and easier to do stapled rather than hand-sewn anastomosis. It was concluded that whether the anastomosis was done with a hand-sewn or a stapled technique, there was still some sphincter damage.

Lavery et al (5) compared a small series of patients who underwent either a mucosectomy or a stapled anastomosis. The mean resting pressure in the mucosectomy group was decreased compared with the stapled group. Both minor and major soiling, particularly at night, were increased in the mucosectomy group compared with the stapled group. Recently, Sugarman et al (6) compared stapled versus nonstapled anastomoses and concluded that daytime spotting, nighttime accidents, nighttime spotting and nighttime use of a perineal pad were all increased in individuals with a hand-sewn versus a stapled anastomosis. In addition, they showed that the maximum resting anal sphincter pressure was again decreased in the hand-sewn nonstapled group.

Only in the randomized controlled study by Seow-Choen et al (7), who compared hand-sewn versus stapled anastomosis in two groups of 14 patients each, were there no differences in the functional results. The vast majority of reports have concluded that the functional results are better with a stapled anastomosis versus a hand-sewn anastomosis.

LEAK RATE
The technique used in our own series has evolved over time. Initially, we used a long rectal cuff and then progressed to a short anal cuff as described above. All procedures were done with a complete mucosectomy and a hand-sewn ileoanal anastomosis initially but, in the past three years, we have used a stapled anastomosis without a mucosectomy and more recently without a defunctioning ileostomy. Of 325 patients who have undergone a hand-sewn anastomosis with a complete mucosectomy, there have been 40 leaks (12%) (8). Sixteen of these pouches have been removed because of failure to heal following an ileoanal anastomotic leak. In 87 patients who had a stapled anastomosis, there were six leaks (7%) at the ileo-anal anastomosis. The difference was statistically significant. Of the six leaks in the latter group, only one pouch has been removed.

Thus, in this series there has been a decrease in the leak rate with stapled versus hand-sewn anastomosis. However, most of the patients in the hand-sewn group were from the early phase of the series, and the difference in results may be partly due to an improvement in surgical expertise. In addition, the follow-up is shorter for the stapled group.

RISK OF CARCINOMA
There is certainly a theoretical risk of carcinoma developing in the residual anal mucosa that is left behind following a stapled ileoanal anastomosis. A study by Tsunoda et al (9) demonstrated a relationship between high grade dysplasia in the resected specimen and high grade dysplasia in the anorectal mucosal stripings. In 12 patients with ulcerative colitis who demonstrated dysplasia in the resected specimen, three had dysplasia in the anorectal mucosa. King and Lubowski (10) reported 16 patients with ulcerative colitis in whom the anorectal mucosal stripings were examined. Four of the patients had moderate dysplasia and one had an adenocarcinoma which precluded the pelvic pouch procedure.

However, despite the theoretical risk of carcinoma in residual anorectal mucosa, at least two cases have been reported in which this has occurred following a mucosectomy. In both of these cases, the indication for surgery was dysplasia (11,12). Therefore, there may be a very small risk of cancer developing in residual anorectal mucosa. However, the risk may exist even if a mucosectomy has been performed. Therefore, if the indication for surgery is dysplasia, we suggest that a complete mucosectomy be performed.

RESIDUAL ANORECTAL MUCOSA AND POUCHITIS
There have been no reports to date implicating an association between residual anorectal mucosa and the development of pouchitis. The symptoms that might develop from residual anorectal mucosa have been minimal and have been easily managed with local therapies. Sugarman et al (6) reported that only three of 43 patients developed minor symptoms and in our series only four of 158 patients who had a stapled ileoanal anastomosis developed minor symptoms. No pouch has been removed because of the development of symptoms due to the residual anorectal mucosa.

SUMMARY
The current literature indicates that a stapled ileoanal anastomosis is a safe procedure which may lead to a quicker and more easily achievable anastomosis. The leak rate in our own series has been decreased using a stapled anastomosis and the overall functional results may be better. We feel that it is important to recommend that a stapled anastomosis be carried out only in selected individuals showing no evidence of dysplasia and that if a stapled anastomosis is to be used, careful follow-up is required.

REFERENCES
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