Long-term outcome after ileal pouch-anal anastomosis for ulcerative colitis

In this issue of *ANZ Journal of Surgery*, Tonelli *et al.*¹ report on a 27-year experience with ileal pouch-anal anastomosis (IPAA) for chronic ulcerative colitis (CUC) using different types of pouches and various anastomotic techniques. Hand-sewn anastomosis was associated with a significantly higher rate of late complications, especially strictures (10%) and worse function including impaired continence and a higher incidence of loss of discrimination compared with double-stapled anastomoses. The incidence of cuffitis was highest in single-stapled anastomoses (31%) and comparable in hand-sewn and the more recently employed double-stapled techniques. Overall, pouch loss was commendably low at 2.1% after a mean follow-up of nearly 14 years.

This study demonstrates several important findings. First, IPAA was found to be durable with stable function over time. Second, the anal transition zone (ATZ) does not need to be removed completely and finally, a double-stapled anastomotic technique should be used whenever possible. These findings support and extend those of previously reported studies. For example, we have shown that IPAA has good, predictable and stable functional and quality of life outcomes in a cohort of 409 patients followed annually over 15 years.² Daytime stool frequency changed little (mean 6), while night-time frequency increased from one to two stools. Perfect continence was present in 55% of patients at 15-year follow-up with a small increase in occasional but not frequent episodes of daytime faecal incontinence.

When IPAA was first performed (circa 1981), endoanal mucosal resection and hand-sewn IPAA was the only methodology used. Although this removed the ATZ completely and therefore reduced the risk of subsequent cancer to nearly zero, nocturnal soiling was frequent and patients often had to wear pads during both daytime and night-time. We know now that the ATZ is important for discrimination of stool and gas and therefore only needs to be removed completely in CUC patients if preoperatively, high-grade dysplasia or cancer is present in the rectum (HR of 3.7 and 13.4 for subsequent cancer, respectively).³

With the report of Sagar *et al.* in 1992⁴ and the findings of randomized studies,⁵ double-stapled anastomoses emerged slowly as the technique of choice. These stapled anastomoses preserve a short segment of ATZ which in turn facilitates better discrimination and continence. Stapled anastomoses also reduce the high stricture rates of hand-sewn anastomoses as shown by Tonelli *et al.*¹ Today, the ATZ should be kept not longer than 1 cm to avoid cuffitis.⁶ If cuffitis does occur and does not respond to 5-ASA and/or steroid treatment (48% in a cohort of 120 patients with cuffitis), Crohn's disease needs to be ruled out.⁷ In non-Crohn's cases, the rectal cuff can be excised transanally. Only rarely it will end in pouch loss but stricturing can be a problem.

Importantly, laparoscopic double-stapled IPAA (which was excluded in Tonelli's study) is the standard surgical approach presently. This is performed either fully laparoscopically or using hand-assisted techniques.^{8,9} A minimally invasive approach not only increases short-term patient benefits such as less pain and therefore a faster recovery, but also reduces the infertility rate to 27% as compared to fully 48% in open surgery.¹⁰ The hypothesis is that laparoscopic surgery induces fewer fallopian tube adhesions and scarring. And, once pregnant, vaginal delivery proceeds routinely after IPAA.¹¹

Most surgeons who treat CUC patients agree that IPAA surgery is technically challenging and should probably only be performed in centres with much experience. This was shown in a population-based study where a low annual case load was associated with significantly worse outcomes.¹² In addition, it is important to remember that patients undergoing IPAA surgery are young (average age: 35 years) and will need a good functioning pouch for more than 50 years. Therefore, surgical trauma needs to be minimized and septic complications should be avoided as these negatively influence outcomes and quality of life.¹³ For all these reasons, we believe that a laparoscopic double-stapled IPAA with protecting loop ileostomy is the best choice for our patients. Some authors have championed three-staged IPAA if patients are severely immunocompromised and have been on multiple courses of biologic medication.¹⁴

This report by Tonelli *et al.*¹ in this issue of *ANZ Journal of Surgery* is further evidence of the long-term viability of IPAA in patients with CUC. The goal of IPAA surgery is to protect the patient from malignant transformation of the colon, to achieve an excellent quality of life with excellent pouch function and faecal control and confer normal fertility, all by ensuring a high pouch success rate exceeding 95%.

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Dieter Hahnloser,* MD

John Pemberton,† MD

*Department of Surgery, University Hospital Lausanne, Lausanne, Switzerland and †Department of Colon and Rectal Surgery, Mayo Clinic, Rochester, Minnesota, USA

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Colonic stenting in malignant large bowel obstruction: an unanswered question

Malignant large bowel obstruction remains a considerable problem. Up to 30% of colorectal cancers present as an emergency with colonic obstruction, predominantly left-sided obstruction. Despite considerable advancements in the management of metastatic disease, only 50% will be candidates for curative surgery.¹ Emergency surgery for malignant bowel obstruction is associated with a mortality rate of up to 30%, significantly greater than elective colorectal cancer resection. It also results in considerable morbidity with prolonged hospital stay, delay in initiation of chemotherapy and frequent stoma formation, with impairment of quality of life.²

In this edition of *ANZ Journal of Surgery*, Padwick *et al.* report a 10-year experience of colonic stent insertion to relieve large bowel obstruction from colorectal cancer, proposing that acute colonic stent insertion could be successfully delivered at a regional level in the UK, for both palliative and curative cases.³

Acute large bowel obstruction was a problem crying out for innovation and the introduction of colonic stenting in 1991 had the potential to be a disruptive technology, fundamentally altering the management. Colonic stents can be utilized either as a definitive method to relieve large bowel obstruction in palliative cases or as a 'bridge-to-surgery' in potentially curative cases, facilitating deferral of surgery to an elective intervention. Unfortunately, 25 years later, the optimal approach remains undefined, despite the excellent results portrayed by Padwick *et al.*³ Their results are in concordance with the conclusions of a meta-analysis of colonic stenting published in 2007, reporting low complication rates with stenting.⁴ Other Australasian studies have echoed these results. Finlayson *et al.* reported a series of 65 patients undergoing colonic stenting for obstructing

Stage IV colorectal cancer, with successful insertion in 98.5%, a complication rate of 23.1% and only 7.7% of patients requiring surgery.⁵ Abbott *et al.* reported colonic stent insertion for malignant obstruction in 146 palliative patients, with success insertion in 97.3%, colonic perforation in 4.8% and 11% requiring a stoma.⁶

Although there have been multiple cohort series demonstrating excellent results for colonic stenting, there is a lack of provision of level 1 evidence to demonstrate generalizability and address specific questions. Undertaking randomized controlled trials (RCTs) of an intervention requiring high technical efficacy remains a challenge, both in terms of recruitment and technical success rate, ranging between 47% and 95% in the published RCTs of colonic stenting.⁷⁷ Of greater concern is that one trial was suspended due to a high perforation rate of 13%.⁸ This has not been demonstrated by the published cohort series; however, it is undetermined whether this is experience or publication bias, and is of particular concern in cases of bridge-to-surgery where the oncological outcome of a potentially curative case could be compromised. Concern over oncological equivalence may also be present in bridging cases that do not perforate. Sabbagh *et al.* reported a comparative study of stenting for bridge-to-surgery versus primary surgery for patients with malignant colonic obstruction being treated for cure.⁹ Whilst there was a non-significant trend for improved survival in the surgery group, there was a significant reduction in 5-year survival in patients who were perforation- and metastasis-free and undergoing colonic stenting (30% versus 67%). Stenting of colonic cancer has been shown to result in increased circulating tumour RNA, which may provide a theoretical reason for poorer long-term survival in curative cases.¹⁰