

The Editors welcome topical correspondence from readers relating to articles published in the *Journal*. Responses should be sent electronically via the BJS website ([www.bjs.co.uk](http://www.bjs.co.uk)). All letters will be reviewed and, if approved, appear on the website. A selection of these will be edited and published in the *Journal*. Letters must be no more than 250 words in length.

### Single-incision laparoscopic right hemicolectomy (*Br J Surg* 2010; 97: 1881–1883)

Sir

As advocates of single-incision laparoscopic surgery (SILS) we were interested in the paper by Keshava and colleagues describing the feasibility of SILS right hemicolectomy. The major advantage of SILS surgery as far as we are concerned is cosmesis, with effectively 'scarless' surgery owing to the wound being hidden within the umbilicus. The stated risks of abdominal wall and internal organ trauma, as well as port-site herniation, with two extra 5-mm trocars placed to aid dissection are negligible.

The median size of the mid-line laparotomy wound was 4 (range 3–6) cm and extended outside the borders of the umbilicus (*Fig. 2*). The cosmetic benefits of this method are therefore no different from those of the standard laparoscopic approach, barring two 5-mm incisions.

Because of the size of the right hemicolectomy resection specimen it may not be possible to perform SILS surgery with the wound inside the umbilicus and therefore without external visible scarring. As the insertion of extra dissection ports would make the surgery quicker and easier, the value of a single-incision approach in this operation, although feasible, would have to be questioned.

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### Author's reply: Single-incision laparoscopic right hemicolectomy (*Br J Surg* 2010; 97: 1881–1883)

Sir

I welcome the comments from Drs Hewes and Adamo. Their perception of single-incision laparoscopic surgery (SILS) for colorectal pathology is held by others practising SILS. However, unlike bariatric surgery, colorectal operations are specimen-orientated such that the size of the incision needs to allow for delivery of the specimen with adequate clear margins and inclusive of mesenteric contents. Furthermore, the incision must also allow the surgeon to safely restore intestinal continuity. Such an incision by necessity will often extend beyond the umbilicus. In our presentation, the photograph of the incision was taken at the end of an operation and, based on our experience will have retracted considerably in size into the umbilicus when inspected at 6 months.

Trocar-related injuries at the time of surgery and port-site complications have been documented extensively in the literature. I agree that they are uncommon, but they do occur and this cannot be overlooked. Many colorectal resections performed by conventional laparoscopic surgery have two additional 5-mm and another 12-mm port. These larger ports can be associated with postoperative hernia, bleeding, pain, hypertrophic scarring (especially in Oriental and Asian patients) and adhesion formation. The aim of the operation is not to be 'scarless'; however, it certainly does reduce the number of scars.

Our experience clearly demonstrates that colorectal resections can be performed safely and efficiently via a single-incision approach, appropriate to the pathology encountered, while avoiding potential port-site morbidity.

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### Rectal washout and local recurrence of cancer after anterior resection (*Br J Surg* 2010; 97: 1589–1597)

Sir

We read with interest the article by Kodeda *et al.*, and believe that no conclusion can be drawn from the results presented. Many retrospective studies have already been published that were not able to come to a definitive conclusion<sup>1</sup>. The authors conclude that 'there was a more favourable outcome in patients after rectal washout than without'. However, as the comparison groups are different in regard to several key factors, it is unclear how they came to this conclusion.

The authors do not establish at what point in the operation the washout was performed, as well as the type and quantity of fluid used. A washout may be performed at the start of the operation, before distal transection of the rectum, or after it, before anastomosis. This would clearly affect whether cancer cells remain at the anastomosis or spill out into the pelvic cavity. In addition, a wide range of fluids may be used, depending on the purpose of the washout. Povidone-iodine, saline, water and sodium hypochlorite are used in rectal washouts today. A study by Scammell and colleagues<sup>2</sup> suggested that sodium hypochlorite is a more effective fluid for rectal washout than saline when trying to prevent infectious complications. Sodium hypochlorite was shown to significantly reduce counts of both *Escherichia coli* and *Bacteroides fragilis* in the rectal stump. It is not known what, if any, effect this solution would have on malignant cells. For the purpose of preventing cancer recurrence, water, saline and povidone-iodine have all been used, with no definitive evidence that one is more effective than the other. Thus, knowing the type of fluid used during each procedure is imperative, and grouping all patients together may not give an accurate assessment. Furthermore, the amount of fluid used in the washout is important. A recent study by Maeda and co-workers<sup>3</sup> concluded that the efficacy of rectal washout in clearing loose malignant cells is determined by

the irrigation volume. The authors do not describe how the washout was performed and admit that there was significant variability in the procedure. As the patients underwent a non-standardized washout technique, they are probably not comparable.

It is likely that more experienced colorectal surgeons adhere to a rectal washout, whereas less experienced or lower-volume surgeons may not. No information was given concerning expertise or case volume of the surgeons involved in this study. Furthermore, the study did not stratify general surgeons and colorectal surgeons. Borowski and associates<sup>4</sup> confirmed that procedures performed by surgeons with a high-volume caseload resulted in improved rates of survival for rectal cancer. It would be useful to know whether the patients who had more recurrence were operated on by less experienced surgeons.

Of note, the patients who underwent rectal washout also had less incidence of intraoperative tumour perforation, received more neoadjuvant radiotherapy and had a higher rate of R0 resection. Therefore, the patients who did not undergo rectal washout also had other risk factors for a higher rate of local recurrence, and the authors cannot conclude that the rectal washout had any influence on outcomes based on their results.

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- 2 Scammell BE, Phillips RP, Brown R, Burdon DW, Keighley MRB. Influence of rectal washout on bacterial counts in the rectal stump. *Br J Surg* 1985; **72**: 548–550.
- 3 Maeda K, Maruta M, Hanai T, Sato H, Horibe Y. Irrigation volume determines the efficacy of 'rectal washout'. *Dis Colon Rectum* 2004; **47**: 1706–1710.

- 4 Borowski DW, Bradburn DM, Mills SJ, Bharathan B, Wilson RG, Ratcliffe AA, *et al.*; Northern Region Colorectal Cancer Audit Group (NORCCAG). Volume–outcome analysis of colorectal cancer-related outcomes. *Br J Surg* 2010; **97**: 1416–1430.

#### Author's reply: Rectal washout and local recurrence of cancer after anterior resection (*Br J Surg* 2010; **97**: 1589–1597)

Sir

Thank you for your relevant comments and the opportunity to clarify specific parts of the paper.

It is most likely of importance how the washout is performed and also with what solution. As stated in the paper, we defined the procedure as an irrigation of the rectal lumen after cross-clamping below the tumour but before division of the bowel and anastomosis. We agree that the theoretical rationale is to avoid spillage of free tumour cells into the abdominal cavity or incorporation into the anastomosis. It was not possible to evaluate the type of solution used, but this does not explain the observed difference between the groups.

We also agree that there were differences between the 'washout' and 'no-washout' groups. Potential known confounders can be dealt with in a multivariable analysis or by restricting the groups to patients without the confounders. Both these strategies were used in the paper – separately and simultaneously. The odds ratio favouring washout in the multivariable analysis was 0.61 and after restriction it was 0.58. The relative risk of local recurrence was less than 1 in all analysed subgroups, favouring washout.

As acknowledged in the discussion, there are potential unknown confounders (where data were lacking) that could not be taken into account. If the distribution between the groups is random it will only lead to a 'dilution' of the outcome measured. If they are distributed unevenly between the groups,

they will have an effect on the result and cause bias. Competence level was highlighted in the paper and we thus agree with you that experience is of the utmost importance.

Causality is often the key issue in epidemiological studies and should be evaluated critically. Analysis of the observed difference is the core of this paper and we disagree that no conclusion can be drawn. We believe it is justified to recommend rectal washout as routine practice in anterior resection of rectal cancer.

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#### Meta-analysis of intraoperative povidone–iodine application to prevent surgical-site infection (*Br J Surg* 2010; **97**: 1603–1613)

Sir

I read with interest the article by Dr Fournel and colleagues about use of intraoperative povidone–iodine (PVI) application to prevent surgical-site infection (SSI). Surgeons have used different strategies to combat SSI. However, two factors must be taken into consideration: how safe and how effective is the treatment.

The first priority is safety, which should be determined by whether the progress of wound healing (inflammatory, proliferative, re-epithelializing and remodelling stages) is hindered. In this meta-analysis, there was no detailed discussion on this topic. Lineaweaver and co-workers<sup>1</sup> identified 0.05 per cent as a safe concentration of PVI for fibroblasts; higher concentrations were 100 per cent cytotoxic in some *in vitro* studies. From their *in vivo* studies in rats, delayed epithelialization was found in wounds treated with PVI at 4 and 8 days after surgery. In human studies, systemic iodine toxicity as a result of iodine absorption from wounds dressed with PVI gauze<sup>2</sup> or sterilized with solution<sup>3</sup> has been reported.

Nevertheless, a large prospective randomized controlled human study should be performed before any conclusion is made.

Effectiveness of PVI could be evaluated by its ability to kill microorganisms and to decrease the rate or severity of SSI. Fournel and colleagues have discussed the latter in detail, but not the former. Araujo *et al.*<sup>4</sup> mentioned that washing the peritoneal cavity of rats with solution containing PVI was able to reduce the absorption of bacteria by the peritoneum<sup>4</sup>. However, the applicability of this result to humans seems debatable.

In 1992, SSIs were divided into incisional SSI and organ/space SSI by the Centers for Disease Control and Prevention's National Nosocomial Infections Surveillance system. Two-thirds of SSIs were confined to the surgical incision and one-third involved organs or spaces accessed during surgical procedures<sup>5</sup>. As general surgeons, we routinely use penrose drains to drain fluid from intra-abdominal spaces and the subcutaneous layer of incisional wounds in situations where there is the potential for contamination. In our experience, drainage seems to be more effective and safe than any type of antiseptic.

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**Authors' reply: Meta-analysis of intraoperative povidone–iodine application to prevent surgical-site infection (*Br J Surg* 2010; **97**: 1603–1613)**

Sir

We thank Dr Chiu and colleagues for their comments on our meta-analysis. We agree that the patient's safety is a major concern for all healthcare practitioners. Recently, Vermeulen and colleagues<sup>1</sup> performed a systematic review of 27 randomized clinical trials in order to investigate the possible beneficial and harmful clinical effects of iodine in the treatment of all types of contaminated wounds in humans. Interestingly, they showed that, in most clinical trials, iodine was not associated with delay in the wound-healing process, particularly in chronic and burn wounds. Moreover, in a recent survey of a representative sample of surgeons, we showed that povidone–iodine (PVI) lavage or irrigation was widely used, particularly in abdominal surgery<sup>2</sup>.

The main endpoint we chose in our meta-analysis was surgical-site infection (SSI), a clinical criterion, which is more relevant than surrogate endpoints such as microbiological contamination. SSIs are divided into superficial, deep or organ/space by the Centers for Disease Control and Prevention, and we can hypothesize that subcutaneous lavage might reduce deep SSI, whereas lavage before wound closure might reduce organ/space SSI.

The aim of our meta-analysis was to compare the effectiveness of intraoperative PVI application *versus* no antiseptic. The comparison of drainage *versus* antiseptic lavage is another issue, which would require a specific study. We are currently preparing a large randomized controlled trial to assess

definitively the effectiveness of PVI subcutaneous lavage *versus* saline in abdominal surgery, which should answer Dr Chiu and colleagues' comments.

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**Rectum-conserving surgery in the era of chemoradiotherapy (*Br J Surg* 2010; **97**: 1752–1764)**

Sir

I read this very topical systematic review with interest. The authors have identified the difficult decisions that we have to make after chemoradiotherapy (CRT) for rectal cancer. They may have overstated the evidence that post-CRT downstaging translates into improved local control. Only five of the six studies analysed reported a comparison between tumours showing a complete rather than a partial response; the four smaller and older studies (679 patients in total) found a difference; the more recent and larger study (3760 patients) did not report a significant difference. We need more evidence before we can be sure that a complete pathological response leads to a lower local recurrence rate.

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**Authors' reply: Rectum-conserving surgery in the era of chemoradiotherapy (*Br J Surg* 2010; 97: 1752–1764)**

*Sir*

We indicated that local control was not assessed by the largest study (NS referring to 'not stated' rather than indicating lack of significance). Because those data were derived from the Surveillance, Epidemiology and End Results database, information on local or distant recurrence cannot be

provided. Our apologies for not making this more explicitly clear – we naively assumed that this was common knowledge. A good clinical and pathological response to neoadjuvant therapy confers improved local control, and complete responders have an excellent prognosis. There are ample data to support these statements. The fact that tumours with complete pathological responses after chemoradiotherapy (ypT0) have only 3 per cent positive nodes implies that simple transanal excision alone may be appropriate. This has been the practice

of the authors, with data recording in a prospective fashion to inform others in time. The dilemma arises when the locally excised specimen demonstrates ypT1 or ypT2. For the moment, in the absence of trial data (*versus* chemotherapy alone), we continue to offer major excisional surgery to these patients.

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## Answer

### Snapshot Quiz 11/01

This 65-year-old lady has carcinoma of accessory breast tissue. Ultrasound guided core needle biopsy showed moderately differentiated infiltrating duct carcinoma arising from accessory breast tissue (both breasts were normal). Wide local excision along with axillary dissection confirmed a moderately differentiated infiltrating duct carcinoma. Eight out of twenty axillary lymph nodes were positive for metastases. She received adjuvant chemotherapy, radiotherapy to the axilla and tamoxifen. Primary accessory breast cancer is rare with poor outcome due to early lymph node metastases. Mastectomy is not needed if the breasts are otherwise normal.