

Simple, Rapid, Safe, and Cost-Effective Technique for Rectal Washout During Laparoscopic Surgery for Rectal Cancer

Sir,

Oncological outcomes after surgery for rectal cancer have improved significantly in recent decades, largely due to the introduction of total mesorectal excision and the increasing use of adjuvant and neoadjuvant treatments.¹ However, local recurrence following resection of rectal cancer remains a serious problem which can result in intractable symptoms and poor prognosis.² A potential source of local recurrence of rectal cancer is the implantation of viable malignant cells exfoliated from the primary tumour. Intraoperative rectal washout is suggested because it can eliminate these cells and reduce the risk of local recurrence.^{3,4}

In open surgery, rectal washout is considered to be inexpensive, simple, and quick to perform. However, laparoscopic surgery requires more manipulation of the rectum, which makes the performance of rectal washout more technically complex and increases the operative time.⁵ Here, in this report, the authors describe their experience with a simple, rapid, safe, and cost-effective technique using readily available instruments for rectal washout during laparoscopic rectal surgery.

Following the standard laparoscopic technique with mobilisation of the mesosigmoid and mesorectum, a nylon cable tie was introduced completely into the abdominal cavity. The rectum was drawn upwards with a grasping forceps to expose the space behind the mesorectum, and one end of the cable tie was then passed through that space from the right side to the left side. The tail of the cable tie was threaded into the locking box so that it could encircle the rectum distal to the tumour but above the expected line of dissection (Figure 1). The rectum was checked by digital examination to confirm the correct point before the cable tie was firmly tightened to occlude the rectal lumen. The excessive tail of the cable tie was cut off close to the locking box. The nylon cable tie used was a common one with a width of 2.5 mm and a length of 20 mm, which was sterilised and packed separately as a temporary surgical instrument in the operating room.

For the lavage, a disposable flush connection tube and a bag of warmed saline were prepared, and the disposable flush connection tube was connected to the saline bag in advance (Figure 2). The outlet end of the tube was inserted into the anus and the rectum was lavaged continuously with 2000ml of saline. The rectum was then divided below the cable tie with a linear cutting stapler and the operation was completed as per the standard methods.

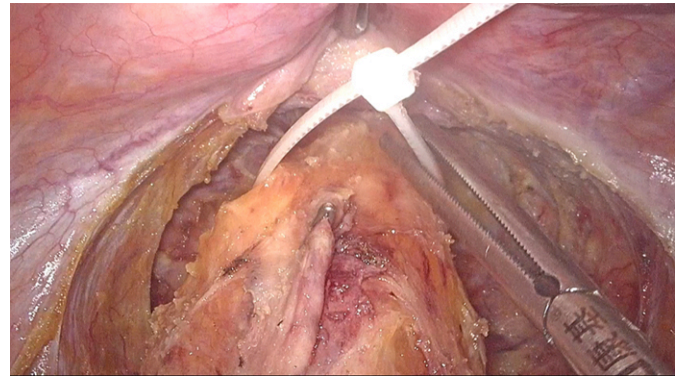


Figure 1: A nylon cable tie used to occlude the rectal lumen distal to the tumour (marked by a titanium clip).

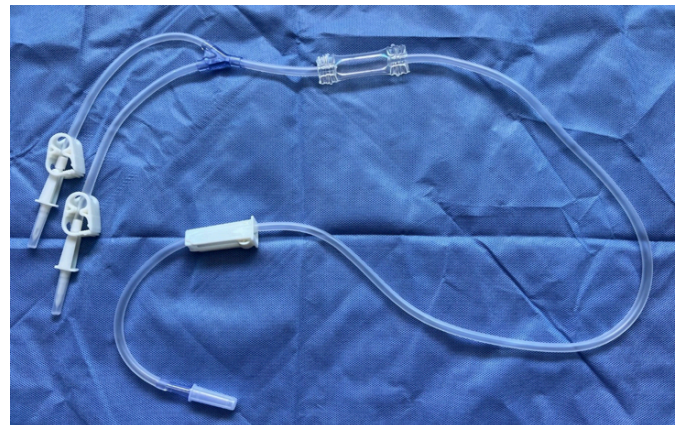


Figure 2: The disposable flush connection tube.

Rectal washout is of great importance to laparoscopic surgery for rectal cancer as it may reduce postoperative infection and local recurrence. The authors recommend the described technique for rectal washout as a routine procedure during laparoscopic rectal surgery as it is simple, rapid, safe, and cost-effective to perform.

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REFERENCES

1. Eraslan E, Adas YG, Yildiz F, Gulesen AI, Karacin C, Arslan UY. Systemic immune-inflammation index (SII) predicts pathological complete response to neoadjuvant chemotherapy in locally advanced rectal cancer. *J Coll Physicians Surg Pak* 2021; **30(4)**:399-404. doi: 10.29271/jcsp.2021.04.399.

2. Iversen H, Martling A, Johansson H, Nilsson PJ, Holm T. Pelvic local recurrence from colorectal cancer: Surgical challenge with changing preconditions. *Colorectal Dis* 2018; **20(5)**:399-406. doi: 10.1111/codi.13966.
3. Solomon J, Majeed T, Magee C, Wilson J. The influence of intraoperative rectal washout on local recurrence of colorectal cancer following curative resection: A systematic review and meta-analysis. *Int J Colorectal Dis* 2022; **37(2)**:403-9. doi: 10.1007/s00384-021-04071-w.
4. Svensson Neufert R, Jorgren F, Buchwald P. Impact of rectal washout on recurrence and survival after anterior resection for rectal cancer. *BJS Open* 2022; **6(6)**:zrac150. doi: 10.1093/bjsopen/zrac150.
5. Simillis C, Mistry K, Prabhudesai A. Intraoperative rectal washout in rectal cancer surgery: A survey of current practice in the UK. *Int J Surg* 2013; **11(9)**:993-7. doi: 10.1016/j.ijsu.2013.06.002.

Xiao Liang¹ and Feng Chi²

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¹Department of General Surgery, Sir Run-Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, China

²Department of Gastrointestinal Surgery, Taizhou Hospital, Zhejiang University School of Medicine, Taizhou, China
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Correspondence to: Dr. Feng Chi, Department of Gastrointestinal Surgery, Taizhou Hospital, Zhejiang University School of Medicine, Taizhou, China

E-mail: 21218178@zju.edu.cn

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