

Peer Review File

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Reviewer A

Interesting study, clear methodology and results. I have two questions clarifying some fine points.

1) In the method lines 104 and 105 you state that 'We excluded any patients who had additional visceral resection during the AR'. Could you provide some further clarification on what is meant by 'additional visceral resection'. How many cases were excluded based on this?

Reply 1: We excluded any patient who required a concomitant solid visceral resection. In our series one patient was excluded as a partial nephrectomy was required.

Changes in the text: We changed the text in lines 104/105 to "We excluded any patients who required a concomitant resection of a solid viscus during the AR." In page 7, line 7 we added "One patient who required a simultaneous partial nephrectomy was excluded from the study."

2) In the method lines 125 to 163 the surgical technique is described in detail. As it is not mentioned one assumes that none of the patients underwent a de-functioning ileostomy. Can you confirm this to exclude it as a potential confounding factor.

Reply 2: Four patients with rectal cancer who underwent neoadjuvant radiotherapy got a defunctioning ileostomy as mentioned on page 7, line 10/11. However, we will make this point clearer.

Change to text: On page 7 line 12 we added " This is the only group of patients in our cohort who received an ileostomy."

Reviewer B

In their interesting manuscript entitled „Is air leak testing really necessary after stapled anterior resection? A case series and a literature review.“, Rajkomar et al question the clinical utility of the "air leak test" following stapled anastomosis in anterior rectum resection procedures. They report on a consecutive series of 71 anterior resections (AR) with stapled

anastomosis, both laparoscopic and in open procedure, with widely different surgical indications ranging from malignant disease to motility disorders. They routinely do not perform air leak testing following stapled, mechanical anastomosis and report a postoperative leak rate of 4.2% percent. Reviewing the current literature on post anastomotic air leak testing, they found their leak rate compares favorably with the published results, arguing that such testing is not sufficient to reduce postoperative anastomotic leakage. Contrary, the lack of such stress testing might lead to reduced rates of postoperative anastomotic leakage (grade C). The authors further parse the literature and report on the lack of standardization for such air leak testing, indicating the lack of scientific merit of this concept.

Overall, this interesting analysis of a “low volume” colorectal surgery cohort demonstrates the tendency even in the modern, evidence driven surgical field to adhere to an obsolete procedure due to tradition and lack of scrutiny. This manuscript should be of great interest to all colorectal laparoscopic surgeons questioning the clinical need to stress a freshly stapled anastomosis for a doubtful test with limited clinical implication.

Minor corrections:

In Figure 2 and 3, please include a scale on the y-axis.

Reply: Change made to figures 2/3.

Throughout the manuscript, please use either “ALT+ / ALT- “ or “ALT+ve /ALT-ve” , while the reviewer clearly prefers the former.

Reply: Abbreviation standardized to ALT+/ALT- in text.

Please state your definition of “high/low/ultra-low” (p4 line 112) resection.

Reply: We will need to include in text.

Change in text: On page 4, line 10-12 we include “The type of AR is defined by the site of the distal transection and anastomosis: high if at more than 8cm from the anal verge, low if at 5-8cm from anal verge and ultra-low if at 3-5cm from the anal verge.”