Emerging single port laparoscopic colorectal surgery

Christof Mittermair[1,2], Michael Weiss[1,2], Helmut G. Weiss[1,2]; on behalf of the ECSPECT Study group

[1]Department of Surgery, SJOG Hospital, Salzburg, Austria; [2]Teaching Hospital of the Paracelsus Private Medical University of Salzburg, Salzburg, Austria

Correspondence to: Helmut G. Weiss. Department of Surgery, SJOG Hospital, Kajetanerplatz 1,5010 Salzburg, Austria; Teaching Hospital of the Paracelsus Private Medical University of Salzburg, Salzburg, Austria. Email: helmut.weiss@bbsalz.at.

Response to: Marks JH, Nagatomo K. Single port laparoscopic colorectal surgery: what did we learn from the ECSPECT prospective multicenter registry study? Ann Laparosc Endosc Surg 2017;2:106.

Received: 08 September 2017; Accepted: 25 September 2017; Published: 26 September 2017.

doi: 10.21037/ales.2017.09.04

View this article at: http://dx.doi.org/10.21037/ales.2017.09.04

We read with great interest the Editorial "Single port laparoscopic colorectal surgery: what did we learn from the ECSPECT prospective multicenter registry study?" by Marks and Nagatomo (1).

First, we gratefully appreciate the congratulations and want to thoroughly answer the questions that were raised in this article.

Oncologic outcome

Regarding the oncologic outcome of single port surgery (SPS) we want to clarify that our study (2) was not designed to prove any benefit of SPS over multiport laparoscopic surgery (MPS) in the long term follow-up. However, overall survival rates and local recurrence rates will be obtained for the study population in 2019 continuing the registry for five more years. Due to the insight we gained through the preliminary long-term registry data, we are very confident that these will be comparable to survival and recurrence rates of MPS in the current literature.

Patient selection

Another question was posed to clarify if any selection indicator for SPS versus MPS was defined throughout the protocol. As a limitation to enter the study all participating centers providing data had patients treated by experts in SPS (all being early adopters with more than 100 procedures before enrollment). No conformity was required to preoperatively select patients for SPS. Therefore five centers predominantly included patients with left-sided colectomies, two centers mainly performed right-colon resections but SPS on the rectum was performed only in seven of the eleven centers. In contrast to the recommendation to identify low risk patients in SPS for elective cholecystectomy, no selection was made based on gender, age, BMI or ASA scores. Anyhow, the large number of patients was sufficient to calculate a novel risk chart which alleviates preoperative selection according to the experience of the surgeon.

Incisional length

Regarding the concern that the technique itself is prone to develop hernia due to the length of the incision in SPS, we would like to bring to attention that literature has yet failed to give a convincing proof of principle for the following conceptual consideration:

The calculated length of an incision required to pass a 10 mm trocar (with an outside diameter of >1,150 mm) for MPS is half of the circumference and results in >1,806 mm (tissue tension and elasticity not taken into account). On the other hand three 5 mm instruments (with an outside diameter of 5 mm each) required for SPS can be delivered via a glove port through a calculated incision of 1,692 mm (using the same mathematical design approach). Derived from the ideal length of incision it is clear that SPS does not have a higher intrinsic risk for incisional hernia compared to MPS utilizing at least one 10 mm trocar or any specimen retrieval requiring an incision of 18 mm or more.

The short observational period in our study cannot refer on valid hernia rates other than wound dehiscences

and infections (2.5%). It is of note that 92% of SPS were completed without any additional incision in the ECSPECT registry study. The average length of skin and fascial incision in the colorectal patient cohort of our department yielded 4,610 and 4,413 mm, respectively (tension free measurements).

Technical details

In all procedures extra-long (bariatric length) optical devices (30° rod lens systems) were used. Surgeons predominantly used straight working instruments (62.2%) followed by curved instruments (37.8%). All surgeons preferred a straight instrument in the dominant hand. Multivariate linear regression confirmed the use of one curved instruments in the helping hand as predictor for shorter operation time.

Finally, we are convinced that future data will clarify some of the concerns about SPS by providing more published evidence that this type of surgery widens the armamentarium of colorectal surgeons to offer their patients minimized minimal invasive but maximal effective surgical treatment.

Acknowledgments

Funding: None.

Footnote

Provenance and Peer Review: This article was commissioned by the editorial office, *Annals of Laparoscopic and Endoscopic Surgery*. The article did not undergo external peer review.

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at http://dx.doi.org/10.21037/ales.2017.09.04). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

References

1. Marks JH, Nagatomo K. Single port laparoscopic colorectal surgery: what did we learn from the ECSPECT prospective multicenter registry study? Ann Laparosc Endosc Surg 2017;2:106.
2. Weiss H, Zorron R, Vestweber KH, et al. ECSPECT prospective multicentre registry for single-port laparoscopic colorectal procedures. Br J Surg 2017;104:128-37.

doi: 10.21037/ales.2017.09.04
Cite this article as: Mittermair C, Weiss M, Weiss HG; on behalf of the ECSPECT Study group. Emerging single port laparoscopic colorectal surgery. Ann Laparosc Endosc Surg 2017;2:148.