



New findings based on national clinical databases analysis

Tomonori Akagi, Masafumi Inomata

Department of Gastroenterological and Pediatric Surgery, Oita University Faculty of Medicine, Oita, Japan

Correspondence to: Tomonori Akagi, Department of Gastroenterological and Pediatric Surgery, Oita University Faculty of Medicine, Oita, Japan.

Email: tomakagi@oita-u.ac.jp.

Comment on: Askari A, Nachiappan S, Currie A, *et al.* Selection for laparoscopic resection confers a survival benefit in colorectal cancer surgery in England. *Surg Endosc* 2016;30:3839-47.

Received: 28 September 2016; Accepted: 09 October 2016; Published: 09 November 2016.

doi: 10.21037/ales.2016.10.10

View this article at: <http://dx.doi.org/10.21037/ales.2016.10.10>

I read the article published in *Surgical Endoscopy* by Askari *et al.* entitled “*Selection for laparoscopic resection confers a survival benefit in colorectal cancer surgery in England*” (1). This article showed the survival benefit of laparoscopic resection for colorectal cancer using a national administrative data set encompassing all elective hospitals in England. Additionally, a subgroup analysis demonstrated the effects of laparoscopic resection for colorectal cancer on survival in elderly patients (>79 years of age). Furthermore, the study demonstrated the effects of laparoscopic resection for colorectal cancer on survival, irrespective of the administration of adjuvant chemotherapy.

A quarter of a century has passed since laparoscopic techniques were first applied to colorectal surgery. Even now, the rate of such surgeries continues to increase worldwide. Thus, the results of most randomized controlled trials in Western countries have revealed the short-term benefits of laparoscopic resection, with no significant difference in long-term outcomes (2). In recent years, a randomized controlled trial was conducted in Japan to evaluate the laparoscopic surgery in comparison to open surgery in terms of the short-term and long-term outcomes according to the current practices in colorectal surgery. Unlike previous randomized controlled trials, the surgical treatment of the two groups in the present study required D3 lymph node dissection equivalent to complete mesocolic excision (CME) with central vascular ligation (CVL) (3). The final results showed that laparoscopic surgery offers improved short-term outcomes and no disadvantages in terms of long-term outcomes. The results further support the use of laparoscopic surgery for colorectal cancer worldwide.

On the other hand, there is a need to evaluate the efficacy of laparoscopic surgery for subgroups of patients with a fragile general condition, including the elderly, patients with tumors located in the transverse colon, and patients with a higher body mass index. In general, such patients have not fulfilled the eligibility criteria of most previous randomized controlled trials. Thus, it is now worth evaluating these subgroups using large data sets, such as national clinical databases. Alan’s finding—that the survival of elderly patients undergoing laparoscopic surgery was better than that of elderly patients undergoing open surgery—is quite impressive.

In recent years, reports using national clinical databases from several nations have been published (4-6). These reports help us to know the differences in the clinical outcomes of different countries. More importantly, these reports demonstrate valuable clinical data that cannot be obtained by randomized clinical trials. A study on low anterior resection using a newly established nationwide large-scale clinical database was reported in Japan in 2014 (7). The study revealed the following variables to be independent risk factors for mortality: a body mass index of >30 kg/m², previous peripheral vascular disease, preoperative transfusion, and disseminated cancer. Unfortunately, the collective clinical data did not include the long-term outcomes. Of course, we need to recognize that analyses of national clinical databases are associated with several limitations. Analyses of national clinical databases should be performed to complement randomized controlled trials and to allow for a better understanding of the clinical questions.

This report was very valuable and could probably

contribute to the establishment of new evidence of the benefits of laparoscopic surgery. In the near future, the clinical outcome, including the long-term outcomes of laparoscopic surgery for rectal cancer, should be compared to that of open surgery. Aspects of treatment that are difficult to assess because of confounding treatment factors, including neoadjuvant therapy and the indication of sphincter preserving surgery, will be investigated using the national clinical database in addition to some randomized controlled trials.

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: Both authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/ales.2016.10.10>). MI serves as an unpaid editorial board member of *Annals of Laparoscopic and Endoscopic Surgery* from Jun 2016 to May 2018. TA has 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.

Open Access Statement: This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-

commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

References

1. Askari A, Nachiappan S, Currie A, et al. Selection for laparoscopic resection confers a survival benefit in colorectal cancer surgery in England. *Surg Endosc* 2016;30:3839-47.
2. Clinical Outcomes of Surgical Therapy Study Group. A comparison of laparoscopically assisted and open colectomy for colon cancer. *N Engl J Med* 2004;350:2050-9.
3. Inomata M, Katayama H, Mizusawa J, et al. A randomized controlled trial to evaluate laparoscopic versus open complete mesocolic excision (CME) for stage II, III colorectal cancer (CRC): First efficacy results from Japan Clinical Oncology Group Study JCOG0404. *J Clin Oncol* 2015;33:abstr 656.
4. Morris EJ, Taylor EF, Thomas JD, et al. Thirty-day postoperative mortality after colorectal cancer surgery in England. *Gut* 2011;60:806-13.
5. Mroczkowski P, Ortiz H, Penninckx F, et al. European quality assurance programme in rectal cancer--are we ready to launch? *Colorectal Dis* 2012;14:960-6.
6. Mella J, Biffin A, Radcliffe AG, et al. Population-based audit of colorectal cancer management in two UK health regions. Colorectal Cancer Working Group, Royal College of Surgeons of England Clinical Epidemiology and Audit Unit. *Br J Surg* 1997;84:1731-6.
7. Matsubara N, Miyata H, Gotoh M, et al. Mortality after common rectal surgery in Japan: a study on low anterior resection from a newly established nationwide large-scale clinical database. *Dis Colon Rectum* 2014;57:1075-81.

doi: 10.21037/ales.2016.10.10

Cite this article as: Akagi T, Inomata M. New findings based on national clinical databases analysis. *Ann Laparosc Endosc Surg* 2016;1:22.