Initial Experience with Single Incision Laparoscopic Appendectomy by Surgical Resident

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Laparoscopic appendectomy serves as a basis for education and training for surgical residents.^{1,2} Furthermore, the authors suggested that single-incision laparoscopic appendectomy (SILA) can be one of the training procedures for surgical residents in this article. They showed superior perioperative outcomes of SILA including shorter operative time and postoperative hospital stay compared with multiport laparoscopic appendectomy (MLA) in their retrospective study. I have some comments:

First, the unclear methodology of parallel comparison can hardly justify the results. SILA was performed by one resident, whereas MLA was performed by four residents and five attending surgeons. Moreover, although MLA-experience of the resident who underwent SILA was over 100 cases before the study, while there is no comment on the experience of the control group. Were the outcomes of the 100 cases of MLA comparable with those of SILA? The comparison in a single resident would give more reliable clues that the authors attempted to show. As different start lines make different results inevitably, different experience of operators easily result in distorted outcomes.

Second, although the authors commented the limitation of selection bias by a retrospective nature, the difference of

operative time and postoperative hospital stay need to be explained. One of the explanations can be due to the body mass index (BMI). Given the average BMI of Asian patients as around 23 kg/m², BMI of 20.8 kg/m² in the SILA group means highly selective indication for SILA, although the authors declared that there was no specific indication for choosing SILA or MLA. Additionally, after exclusion of data of MLA performed by attending surgeons, the gap of operative time reduced (74.8 mins to 56.4 mins). In other words, the mean operative time of attending surgeons, who had much more experience than residents, was over 90 mins. Given the similar baseline characteristics such as ASA classification and severity of appendicitis between the two groups except for BMI, why was the operative time of attending surgeons much longer than those of residents? Readers could misunderstand the results: SILA by a MLA-experienced resident was more safe and feasible rather than MLA by attending surgeons when they met the highly thin patient with acute appendicitis.

There is no doubt that the study has valuable data regarding the training and education system for surgical residents of the Korean Surgical Society. Because surgical skill level could affect clinical outcomes, we should try to find the best way to educate residents with various methods of surgical skill

evaluation.³ To contribute improving the system, more studies including the learning curve and surgical completion according to the seniority of the residents needed. The well-designed statistical methodology such as the moving average or cumulative sum control chart will help researchers make firm conclusions.^{4,5} I expect that more detailed and larger trial for the assessment of surgical training in Korea can be conducted based on this article with complementation.

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