J Gynecol Oncol Vol. 21, No. 2:67-69, June 2010 DOI:10.3802/jgo.2010.21.2.67

Editorial

Laparoscopic surgery is a current tide of widely accepted standard procedure for endometrial cancer

Dong Hoon Suh[1], Jae Weon Kim[1,2]

[1]*Department of Obstetrics and Gynecology,* [2]*Cancer Research Institute, Seoul National University College of Medicine, Seoul, Korea*

Nowadays, a laparoscopic surgery (LS) has become the cornerstone of the minimally invasive surgery in gynecology not only for benign diseases but also for malignant diseases. It has such tempting merits that most surgeons are not able to resist its attractions. Comparing with open surgery (OS), the established benefits of LS include incomparably much less postoperative pain thanks to tiny wound, shorter hospital stays and subsequent medical cost decrease, less estimated blood loss (EBL) and reducing possibility of transfusion with less postoperative complications and comparable treatment outcomes including survivals in selected cases. It has been found that laparoscopic pelvic lymphadenectomy was facilitated by the positive intraperitoneal pressure secondary to pneumoperitoneum, which helps dissect the pelvic spaces.[1]

To date, with/without pelvic or para-aortic lymphadenectomy, laparoscopic radical hysterectomy for early stage cervical cancers and staging operation including total laparoscopic hysterectomy (TLH) or laparoscopic-assisted vaginal hysterectomy (LAVH) for endometrial cancers are widely performed by gynecologic oncologists in many centers across the globe.[2] In addition, for adnexal pathology, even though the use of laparoscopy is relatively limited only for benign and early stage malignant disease, the role of LS is considerable. The main reason why LS is not used in ovarian cancer as many as other gynecologic malignancy seems to be the disease progression pattern of ovarian cancer, which is sprayed and disseminated in the whole abdominal and pelvic cavity rather than step-by-step pattern, and the best strategy of treatment, "optimal debulking," which is not easy to accomplish by LS in advanced stage.

Given this LS wave, the current issue printed one article about comparison laparoscopic versus conventional open surgical staging procedure for endometrial cancer.[3] It demonstrated that LS in endometrial cancer is a safe and feasible therapeutic procedure with comparable progression free survival and overall survival, which was in agreement with most of previous studies.[2,4-6] However, further multicenter randomized trials were warranted at all these studies. Recently, the initial survival data from timely LAP2 study of the Gynecologic Oncology Group (GOG) were just released at the 41st annual meeting of the Society of Gynecologic Oncologists (SGO).[7] They confirmed the safety, feasibility and comparable survival rates of LS, which have been reported by the previous small, non-randomized studies before,[1,8,9] and suggested LS for a standard of care for uterine cancer.

We can make some critical remarks on this article as follows: the outcomes were the same as previously reported and did not contribute new information to the literature. This was not a randomized trial and not similar to patients outside of Korea, therefore, could not be generalized to other locations of practice. And it had clinician specific bias into the treatment plan of individual patients. The hospital stay was explained by the placement of drains which a slow to be removed and was no longer a treatment standard in modern oncology practice worldwide. We acknowledge the lack of specificity and the limitations of this article as a retrospective study. Nevertheless, we thought this article had some meaning in not only that it was worth confirming the comparability of LS to OS in endometrial cancer staging operation but also that it would make many readers who were preparing retrospective studies think over how to overcome the limits of this kind of study design. When it comes to a surgical drain, of course it is not any more the recommendation in oncologic surgical treatments and it could lengthen the hospital stay. However, it does not matter whether they placed drains or not in terms of the comparison results reliability, only if the usage were equal in both groups.

In fact, this study has several shortcomings. At first, as researchers acknowledged, this study has a few limitations as a retrospective study. Small number of cases and non-randomization weaken its power and reliability like other previous retrospective studies.[1,10,11] This kind of study cannot be blinded as it is impossible to hide the type of surgery performed, either

Received June 22, 2010, Accepted June 22, 2010

Correspondence to **Jae Weon Kim**
Department of Obstetrics and Gynecology, Seoul National University College of Medicine, 28 Yeongeon-dong, Jongno-gu, Seoul 110-744, Korea
Tel: 82-2-2072-3511, Fax: 82-2-762-3599
E-mail: kjwksh@snu.ac.kr

from patients or from healthcare professionals.[12] This inevitably introduces bias. If the healthcare workers know that a patient has undergone LS, they may well expect a faster recovery and organize care in a different way from that of patients treated by OS. This bias might be avoided in future investigations if postoperative care is standardized. Second, they did mention one more surgeons were in charge of LS and OS of the study patients. Surgical outcomes considerably depend on the surgeon's skill and experience. Therefore, the hidden confounding effects are not to be eliminated even if all the procedures were the same between the two groups. Third, BMI of patients in OS group was higher than that of LS group, and high BMI patients were likely to undergo OS rather than LS. It could also distract the truth. Fourth, the mean follow-up time was short, 25 months (range, 12 to 45 months). However, it should be noted that the majority of recurrences of endometrial carcinoma occur within the first 2 years after diagnosis.[13] Thus, similar 2-year recurrence-free survival may suggest similar long-term survival. Based on the data analyzed in this study, the surgical approach (LS vs. OS) does not appear to impact the survival of women with early-stage endometrial carcinoma significantly.

On the other hands, there could be some pitfalls in LS. After laparoscopic pelvic lymphadenectomy, residual tissue was once reported.[14] Tumor implantation might be the concern associated with LS, however, if any, it was noted to be rare and no worry to preclude LS in the treatments.[15] Lastly, Sonoda et al.[16] from the Memorial Sloan-Kettering Cancer Center raised concerns regarding a high incidence of positive peritoneal cytology among women with low-risk endometrial carcinoma who were treated with laparoscopy. These authors found that 10.3% of the patients treated with LAVH had positive peritoneal cytology compared with 2.8% of the patients treated with laparotomy. The authors speculated that retrograde dissemination of tumor cells into the peritoneal cavity during the uterine manipulation performed during LAVH might have accounted for this difference. However, the clinical significance of the higher positive peritoneal cytology reported among these patients is questionable. They found no significant survival difference between women with positive versus women with negative peritoneal cytology.

There are many kinds of other cancers in which endoscopic surgery is preferred to conventional OS, especially for early stage diseases, for example, cervical cancers,[17,18] colorectal cancers,[19,20] gastric cancers,[21,22] urologic cancers including renal cell carcinomas and prostate cancers,[23,24] and lung cancers.[25,26] Majority of the reports about the comparison of LS vs. OS have insisted the same trends, less complications whether they being intraoperative or postoperative and equivalent survivals.

LS is an inevitable trend in endometrial cancer treatment. However, it should be noted that LS must be performed only by qualified surgeons with enough experience to meet the general surgical adequacy.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. Eltabbakh GH. Analysis of survival after laparoscopy in women with endometrial carcinoma. Cancer 2002; 95: 1894-901.
2. Schlaerth AC, Abu-Rustum NR. Role of minimally invasive surgery in gynecologic cancers. Oncologist 2006; 11: 895-901.
3. Kong TW, Lee KM, Cheong JY, Kim WY, Yoo SC, Yoon JH, et al. Comparison of laparoscopic versus conventional open surgical staging procedure for endometrial cancer. J Gynecol Oncol 2010; 22: 106-11.
4. Ju W, Myung SK, Kim Y, Choi HJ, Kim SC. Comparison of laparoscopy and laparotomy for management of endometrial carcinoma: a meta-analysis. Int J Gynecol Cancer 2009; 19: 400-6.
5. Obermair A, Manolitsas TP, Leung Y, Hammond IG, McCartney AJ. Total laparoscopic hysterectomy for endometrial cancer: patterns of recurrence and survival. Gynecol Oncol 2004; 92: 789-93.
6. Tozzi R, Malur S, Koehler C, Schneider A. Laparoscopy versus laparotomy in endometrial cancer: first analysis of survival of a randomized prospective study. J Minim Invasive Gynecol 2005; 12: 130-6.
7. Walker JL, Piedmonte MR, Spirtos NM, Eisenkop SM, Spiegel G, Mannel RS, et al. Recurrence and survival after randomization to laparoscopy versus laparotomy for comprehensive surgical staging of uterine cancer: Gynecologic Oncology Group Study LAP2. 2010 SGO 41st Annual Meeting, Abstract LBA1.
8. Holub Z, Jabor A, Bartos P, Eim J, Urbanek S, Pivovarnikova R. Laparoscopic surgery for endometrial cancer: long-term results of a multicentric study. Eur J Gynaecol Oncol 2002; 23: 305-10.
9. Cho YH, Kim DY, Kim JH, Kim YM, Kim YT, Nam JH. Laparoscopic management of early uterine cancer: 10-year experience in Asan Medical Center. Gynecol Oncol 2007; 106: 585-90.
10. Kuoppala T, Tomas E, Heinonen PK. Clinical outcome and complications of laparoscopic surgery compared with traditional surgery in women with endometrial cancer. Arch Gynecol Obstet 2004; 270: 25-30.
11. Barwijuk A, Jankowska S. Is laparoscopic or abdominal hysterectomy with bilateral salpingo-oophorectomy more efficient in operative treatment of endometrial cancer? J Obstet Gynaecol 2005; 25: 703-5.
12. Reza MM, Blasco JA, Andradas E, Cantero R, Mayol J. Systematic review of laparoscopic versus open surgery for colorectal cancer. Br J Surg 2006; 93: 921-8.
13. Volpi E, Ferrero A, Jacomuzzi ME, Carus AP, Fuso L, Martra F, et al. Laparoscopic treatment of endometrial cancer: feasibility and results. Eur J Obstet Gynecol Reprod Biol 2006; 124: 232-6.
14. Schlaerth JB, Spirtos NM, Carson LF, Boike G, Adamec T, Stonebraker B. Laparoscopic retroperitoneal lymphadenectomy followed by immediate laparotomy in women with cervical cancer: a gynecologic oncology group study. Gynecol Oncol 2002; 85: 81-8.
15. Abu-Rustum NR, Rhee EH, Chi DS, Sonoda Y, Gemignani M, Barakat RR. Subcutaneous tumor implantation after laparoscopic procedures in women with malignant disease. Obstet Gynecol 2004; 103: 480-7.
16. Sonoda Y, Zerbe M, Smith A, Lin O, Barakat RR, Hoskins WJ.

High incidence of positive peritoneal cytology in low-risk endometrial cancer treated by laparoscopically assisted vaginal hysterectomy. Gynecol Oncol 2001; 80: 378-82.
17. Li G, Yan X, Shang H, Wang G, Chen L, Han Y. A comparison of laparoscopic radical hysterectomy and pelvic lymphadenectomy and laparotomy in the treatment of Ib-IIa cervical cancer. Gynecol Oncol 2007; 105: 176-80.
18. Sobiczewski P, Bidzinski M, Derlatka P, Panek G, Danska-Bidzinska A, Gmyrek L, et al. Early cervical cancer managed by laparoscopy and conventional surgery: comparison of treatment results. Int J Gynecol Cancer 2009; 19: 1390-5.
19. Jayne DG, Guillou PJ, Thorpe H, Quirke P, Copeland J, Smith AM, et al. Randomized trial of laparoscopic-assisted resection of colorectal carcinoma: 3-year results of the UK MRC CLASICC Trial Group. J Clin Oncol 2007; 25: 3061-8.
20. Lim SB, Choi HS, Jeong SY, Park JG. Feasibility of laparoscopic techniques as the surgical approach of choice for primary colorectal cancer: an analysis of 570 consecutive cases. Surg Endosc 2008; 22: 2588-95.
21. Hwang SI, Kim HO, Yoo CH, Shin JH, Son BH. Laparoscopic-assisted distal gastrectomy versus open distal gastrectomy for advanced gastric cancer. Surg Endosc 2009; 23: 1252-8.
22. Lee JH, Yom CK, Han HS. Comparison of long-term outcomes of laparoscopy-assisted and open distal gastrectomy for early gastric cancer. Surg Endosc 2009; 23: 1759-63.
23. Pena Gonzalez JA, Pascual Queralt M, Salvador Bayarri JT, Rosales Bordes A, Palou Redorta J, Villavicencio Mavrich H. Evolution of open versus laparoscopic/robotic surgery: 10 years of changes in urology. Actas Urol Esp 2010; 34: 223-31.
24. Johnson EK, Wood DP Jr. Converting from open to robotic prostatectomy: key concepts. Urol Oncol 2010; 28: 77-80.
25. Nwogu CE, Yendamuri S, Demmy TL. Does thoracoscopic pneumonectomy for lung cancer affect survival? Ann Thorac Surg 2010; 89: S2102-6.
26. Swanson SJ. Video-assisted thoracic surgery segmentectomy: the future of surgery for lung cancer? Ann Thorac Surg 2010; 89: S2096-7.