



The Current Situation of Gynecologic Laparoendoscopic Single-Site Surgery in a Chinese Teaching Hospital

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Introduction

As one type of the laparoscopic surgery, the laparoendoscopic single-site (LESS) surgery has been developed in an attempt to further reduce the morbidity and scarring associated with surgical intervention [1,2]. Single-site Gynecologic Surgery is widely carried out all over the world during the recent years. More and more gynecological endoscopic surgeries use this single-site technology, especially transumbilical single-port. In china, the number of LESS has increased dramatically from 2017. Our hospital started to carry on this technology from September 2017. Many researches have indicated advantages of it, such as less postoperative pain and quick recovery, less skin scar etc. Some results are conflicting [3-10]. The advantages of LESS are still uncertain.

Current Situation in our Hospital

From November 2017 to November 2018, 105 LESS gynecological surgeries were performed, 35 ovarian cystectomies, 38 unilateral fallopian tube resections, 22 myomectomies and 10 hysterectomies through LESS. Only one surgery needed one more additional port. No patients have severe complications. Operative time, intraoperative blood loss and perioperative complications have no difference, compared with the conventional laparoscopy. The LESS laparoscopy group had less postoperative pain scores and longer bowel recovering time, compared with the conventional laparoscopy (Table 1).

Table 1: Clinical Characteristics and Operative Data of LESS.

Variable	Ovarian Cystectomy	Myomectomy	Salpingectomy	Hysterectomy
N	35	38	22	10
Patient age	32.67±6.32	38.82±6.52	31.17±3.13	44.27±3.63
BMI	21.73±3.35	22.20±3.42	20.85±2.50	23.86±3.40
Operating time	107.67±29.85	116.36±59.12	61.26±30.68	126.26±36.48
Blood loss	26.24±18.78	69.09±81.56	20.70±56.27	40.90±46.47
Pain score 24h	1.09±0.64	1.36±1.03	1.26±0.71	2.16±0.71
Bowel recovering time	1.65±0.54	1.71±0.51	1.25±0.50	1.95±0.80
hospital stay days	3.64±1.26	3.81±1.69	3.22±2.43	4.27±2.63

Discussion

Laparoendoscopic single site surgery (LESS) is a single port technique through the umbilicus, in the past 10 years, LESS has emerged as a potentially less invasive alternative to multiport laparoscopy.

At the beginning, a homemade single port is easier to get, low cost and has a good socioeconomic performance. YH Park was the first person who reported that he uses a homemade single port device to perform laparoendoscopic single-site nephrectomy [11]. Many countryside hospitals in China used this kind of homemade single port.

In the application of any new technique, the safety of the patients is always the most important. After a median follow-up period of 3 months, there is no complaint of the LESS surgery. All the LESS group patients were fully satisfied with the appearance of the incisions. We think all surgeons could complete LESS after the learning curve.

In this study, all the patients are benign. Most of patients care about the appearance of the incisions, especially the young patients. Now in our department, many patients are willing to take LESS. Some Chinese doctor applied LESS to malignant diseases, such as cervical cancer, early Ovarian Cancer and endometrial carcinoma [12-14].

We think that the future trend would be single-site robotic surgery associated AI technology.

Conclusion

LESS surgery is less invasive, suitable and safe for gynecological surgery. It has been widely promoted in China.

References

- Fan X, Xu K, Lin T, Liu H, Yin Z, et al. (2013) Comparison of transperitoneal and retroperitoneal laparoscopic nephrectomy for renal cell carcinoma: a systematic review and meta-analysis. *BJU Int* 111(4): 611-621.
- Autorino R, Desai MM, Gettman M, Gill IS, Kavoussi LR, et al. (2011) Laparoendoscopic single-site and natural orifice transluminal endoscopic surgery in urology: a critical analysis of the literature. *Eur Urol* 59(1): 26-45.
- Bansal D, Riachy E, Defoor WR Jr, Reddy PP, Minevich EA, et al. (2014) Pediatric varicocele: a comparative study of conventional laparoscopic and laparoendoscopic single-site approaches. *J Endourol* 28(5): 513-516.
- Friedersdorff F, Aghdassi SJ, Werthemann P, Cash H, Goranova I, et al. (2013) Laparoendoscopic single site (LESS) varicocele with reusable components: comparison with the conventional laparoscopic technique. *Surg Endosc* 27(10): 3646-3652.
- Lee SW, Lee JY, Kim KH, Ha US, (2012) Laparoendoscopic single-site surgery versus conventional laparoscopic varicocele ligation in men with palpable varicocele: a randomized, clinical study. *Surg Endosc* 26(4): 1056-1062.
- Marte A, Pintozzi L, Cavaiuolo S, Parmeggiani P (2014) Single-incision laparoscopic surgery and conventional laparoscopic treatment of varicocele in adolescents: Comparison between two techniques. *Afr J Paediatr Surg* 11(3): 201-205.
- Wang J, Xue B, Shan YX, Cui Y, Tao W, et al. (2014) Laparoendoscopic single-site surgery with a single channel versus conventional laparoscopic varicocele ligation: a prospective randomized study. *J Endourol* 28(2):159-164.
- Youssef T, Abdalla E (2015) Single incision transumbilical laparoscopic varicocele versus the conventional laparoscopic technique: A randomized clinical study. *Int J Surg* 18: 178-183.
- Gasparri ML, Mueller MD1, Taghavi K1, Papadia A1 (2018) Conventional versus Single Port Laparoscopy for the Surgical Treatment of Ectopic Pregnancy: A Meta-Analysis. *Gynecol Obstet Invest* 83(4): 329-337.
- Demirayak G, Özdemir İA1, Comba C1, Aslan Çetin B2, Aydoğan Mathyk B3, et al. (2020) Comparison of laparoendoscopic single-site (LESS) surgery and conventional multiport laparoscopic (CMPL) surgery for hysterectomy: long-term outcomes of abdominal incisional scar. *J Obstet Gynaecol* 40(2):1-5.
- Yong Hyun Park, M.Y.K, Min Su Jeong, Hwang Choi, Hyeon Hoe Kim (2009) Laparoendoscopic Single-Site Nephrectomy Using a Homemade Single-Port Device for Single-System Ectopic Ureter in a Child: Initial Case Report. *Journal of Endourology*, 23(5): 833-835.
- Chen S, Zheng Y, Tong L, Zhao X, Chen L, et al (2020). Laparoendoscopic Single-site Radical Hysterectomy with Vaginal Closure and Without Uterine Manipulator for FIGO IB1 Cervical Cancer. *J Minim Invasive Gynecol*. S1553-4650(20)30036-4.
- Lin C, Ying Z, Xiao Rong Q, Sijing C, Ling M, et al. (2019) LESS with Suture Suspension for Early-Stage Adnexa Cancer Staging. *JSL* 23(3): e.00024.
- Chen S, Qi X, Chen L, Yi Q1, Dong S, et al. (2019) Laparoendoscopic Single-site Surgery for Comprehensive Staging of Early Ovarian Cancer. *J Minim Invasive Gynecol* 26(5): 806.