

Laparo-Endoscopic Single Site Surgery of Concomitant Left Adrenalectomy, Left Nephroureterectomy, and Bilateral Partial Oophorectomy in a Woman

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Abstract

Aim: We reported one case who received laparo-endoscopic single site (LESS) surgery for the left adrenal gland, left kidney, and bilateral ovarian cysts.

Method: The patient was a 43 year-old female who had a left adrenal tumor, atrophic left kidney with severe hydronephrosis, and bilateral ovarian cysts. We placed a LESS device with 4 working ports through a para-umbilical wound of 3 cm in length. We concomitantly performed a left adrenalectomy, left nephroureterectomy, and bilateral partial oophorectomy with the patient lying on her right side.

Results: There were no peri-operative and post-operative complications, and an extra incision was unnecessary. The patient was discharged 5 days after the operation.

Discussion: LESS surgery for three concomitant operations with an un-changed position is feasible and safe. Conclusion: This is the first report of three concomitant procedures through one incision, which greatly decreases the number of wounds.

Keywords: LESS surgery; Adrenal gland; Kidney; Ovary

Introduction

Laparo-endoscopic single site (LESS) surgery for adrenal, renal, and ovarian diseases has been reported to be feasible and safe [1-4]. When compared with open surgery or conventional laparoscopic techniques, LESS surgery provides the advantages of better cosmetic outcome, less post-operative wound pain, and faster recovery [1,5]. Simultaneous operations for two organs or procedures through the same port have been reported in some situations such as bilateral adrenalectomy [6], concomitant ovarian cystectomy and cholecystectomy [7], and cholecystectomy combined with hysterectomy [8]. Here we report on a woman who received LESS surgery for a adrenal tumor, atrophic kidney with severe hydronephrosis, and bilateral benign ovarian cystic tumors.

Patient

The patient was a 43-year-old female with an initial presentation of leg weakness. At the emergency department, her blood pressure was 189/105 mmHg and blood potassium level was 1.6 mmol/L. She was a relatively healthy woman with neither previous systemic diseases nor any history of major operations. Her BMI was 22.4 (159 cm, 56.7 kg) and her body image was relatively slim. According to the patient, her only surgical experience was an operation for an ectopic pregnancy about 20 years ago.

A renal ultrasound showed severe hydronephrosis and a suspected adrenal tumor.

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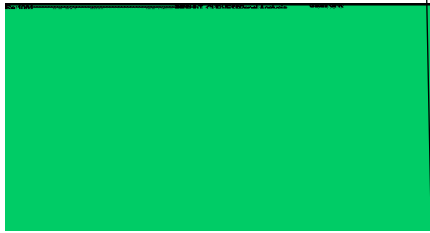


Figure 2 DTPA scan showed very poor renal function (GFR=9.22ml/min).

Surgical Technique

patient was placed lying down on her right side. She received endotracheal intubation, naso-gastric tube insertion, and urethral catheterization. A 3 cm para-umbilical incision was made, and the wound was deepened into the peritoneal cavity. LESS device (Quadriport, Figure 3A) was placed through the wound and a 30 degree telescope of 10 mm was used. Conventional straight laparoscopic instruments were applied for the operation, and the descending colon was totally released to expose the retroperitoneum space. adrenal vein was meticulously separated and transected by Ligasure, and the adrenal gland was removed. that, the renal pedicle was exposed, ligated by vascular clips, and transected. Dissection from the kidney to the ureter was performed at as low a level as possible, then the kidney and ureter were totally excised. Finally, the gynecologist applied conventional laparoscopic instruments through the same port and completed bilateral partial oophorectomy, without changing the patient's position. A small-calibered drainage tube was placed at the renal fossa and was penetrated from the abdominal wall through the wound for the LESS device. specimens were entrapped in a retrieval bag and pulled out of the abdomen through the wound (°ou adtr a d fo Sp,s,p m

procedure shows not only in elective general surgery, but also in emergency surgical cases.

Conclusion

is the report of LESS surgery with 3 simultaneous procedures without an additional trocar or changing the patient's position. When compared with conventional laparoscopic techniques or open surgery, the LESS procedure provided the patient the advantages of good cosmesis, less wound pain, and faster recovery. However, this method is only feasible and provides more advantages for patients with a lower BMI, or with a relatively smaller body size. Further advantages should be evaluated with larger scale of study.

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