

Video Article

Vaginal-assisted laparoscopic nerve-sparing radical trachelectomy

Taşkıran et al. Nerve sparing radical trachelectomy

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Abstract

Fertility-sparing surgery has a popularity in the last three decades for the management of cervical cancer in women under 40 years of age. Radical trachelectomy is a fertility-sparing surgical technique for women who wish to retain their fertility. Vaginal-assisted laparoscopic radical trachelectomy is feasible in selected patients with early cervical cancer. The aim of this video is to present a nerve-sparing vaginal-assisted laparoscopic radical trachelectomy demonstrating pelvic anatomical structures.

Keywords: Cervical cancer, fertility-sparing surgery, hypogastric nerve, laparoscopic radical trachelectomy, nerve-sparing surgery

Introduction

Nearly 25% of all cervical cancers are diagnosed in women under 40 years of age (1). Radical trachelectomy by vaginal approach was the first technique to be presented (2). Several different procedures were described as a fertility-sparing surgery technique (3). A 38 years-old nulliparous woman with high grade keratinized squamous cell carcinoma of the cervix referred to our clinic. She has undergone a loop electrosurgical excision procedure at another center. The pathological review and clinical examination revealed a FIGO stage IB1 cervical carcinoma without lymphovascular space invasion less than 2 cm in the greatest diameter. An abdomino-pelvic magnetic resonance imaging showed no residual disease after loop electrosurgical excision procedure. She underwent vaginal-assisted laparoscopic surgery. One 25 mg/vial kit of indocyanine green was reconstituted in 10 mL of aqueous solvent, and then 2 ml of diluted again in 2 ml of aqueous solvent. Four ml of indocyanine green was injected into the uterine cervix at the 3 and 9 o'clock positions, submucosally and deep of the cervix to locate the sentinel lymph nodes. In the first step, the round ligaments were coagulated, cut and dissected from the anterior and posterior leafs of the broad ligament. The ureters were identified alongside the posterior leaf of the broad ligament. The uterine arteries were then ligated bilaterally at its origin from the hypogastric artery. Both paravesical and pararectal spaces were opened to gain access to the parametria. The anterior

part of the vesicouterine ligament was dissected, and the ureteral tunnel was developed. Colpotomy was performed. All procedures were performed with meticulous dissection of pelvic anatomical structures including hypogastric nerves (video) (Figure 1 and 2). Resection of the cervix was performed at the vaginal part of the procedure. Frozen-section examination was performed to ensure negative surgical margins. Finally, the vaginal mucosa was sutured to the stroma of the cervix. She discharged on post-operative day 4 without any adverse event in post-operative period. She had no residual tumor on final pathology. There was no metastasis to lymph nodes.

In conclusion, vaginal-assisted laparoscopic nerve-sparing radical trachelectomy as a fertility-sparing procedure appears to be a safe and adequate surgical technique in selected young women with early stage cervical cancer.

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References

1. Rob L, Skapa P, Robova H. Fertility-sparing surgery in patients with cervical cancer. *Lancet Oncol.* 2011; 12:192-200
2. Dargent D, Martin X, Sacchetoni A, Mathevet P. Laparoscopic vaginal radical trachelectomy: a treatment to preserve the fertility of cervical carcinoma patients. *Cancer* 2000; 88:1877–82.
3. Bentivegna E, Maulard A, Pautier P, Chargari C, Gouy S, Morice P. Fertility results and pregnancy outcomes after conservative treatment of cervical cancer: a systematic review of the literature. *Fertil Steril.* 2016; 106:1195-121.

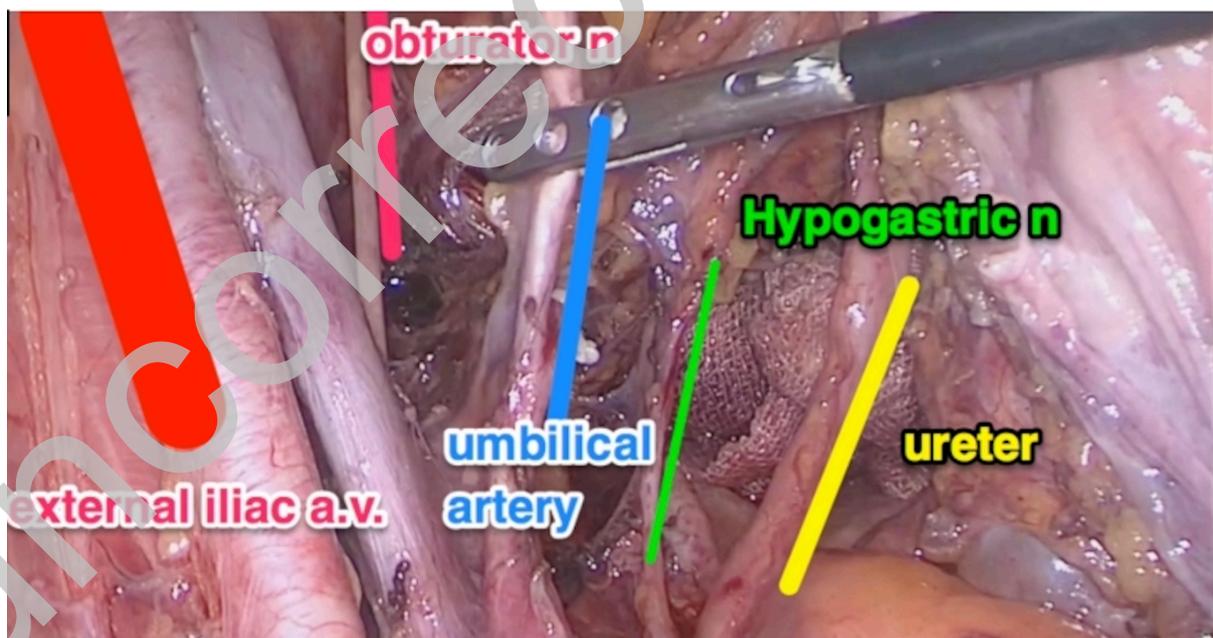


Figure 1. Left pelvic retroperitoneal space demonstrating left external iliac artery and vein, obturator nerve, obliterated umbilical artery, hypogastric nerve, and ureter

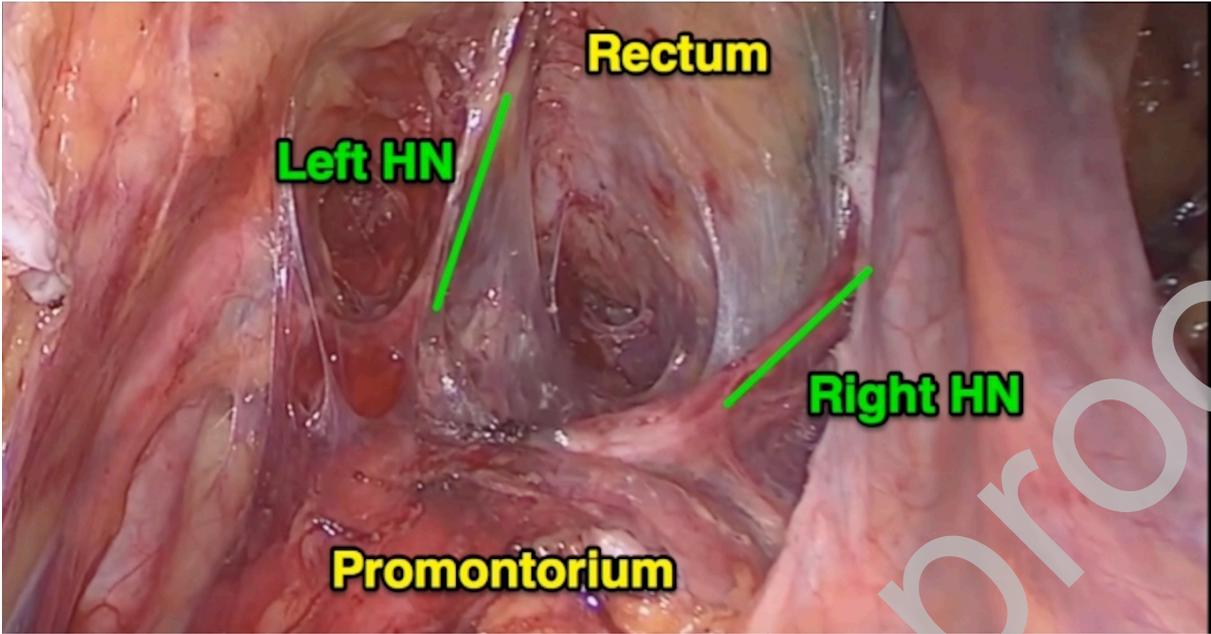


Figure 2. Retrorectal space demonstrating right and left hypogastric nerve.

Uncorrected proof