A new, less invasive approach for retroperitoneal pelvic and para-aortic lymphadenectomy combining the transvaginal natural orifice transluminal endoscopic surgery (vNOTES) technique and single-port laparoscopy

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Transvaginal natural orifice transluminal endoscopic surgery (vNOTES) is a safe and feasible technique. It broadens the indications of conventional vaginal surgery. Recently, a new retroperitoneal sentinel lymph node biopsy via the vNOTES approach was defined for endometrial cancer patients.

Extraperitoneal laparoscopic para-aortic lymphadenectomy has been reported as a feasible technique for endometrial carcinoma and cervical cancer staging. However, the combination of vNOTES with extraperitoneal single-port laparoscopic lymphadenectomy for staging endometrial carcinoma has not been investigated to date.

Video 1 A new, less invasive approach for retroperitoneal pelvic and para-aortic lymphadenectomy combining the transvaginal natural orifice transluminal endoscopic surgery (vNOTES) technique and single-port laparoscopy.
In this video we present the surgical management of a 53-year-old female who presented with post-menopausal bleeding. Endometrial sampling revealed an endometrioid-type Grade 3 endometrial carcinoma. Further investigation revealed no metastasis. A pelvic and para-aortic total retroperitoneal lymphadenectomy combining the vNOTES technique and single-port extraperitoneal laparoscopy was performed (Figure 1). Surgery duration was 210 min and mean blood loss was approximately 150 mL. Post-operative visual analog scale (VAS) pain scores were 6 at 6 hours and 1 at 24 hours. The patient was discharged 30 hours after surgery. The final pathology revealed endometrioid-type Grade 3 endometrial cancer, myometrial invasion greater than 50%, and lymphovascular space invasion. Also, 24 pelvic and 21 para-aortic reactive lymph nodes were reported. Post-operative brachytherapy was planned.

In conclusion, the vNOTES approach provides rapid post-operative recovery and no trocar- or incision-related complications. Besides, the retroperitoneal vNOTES approach provides easy access to pelvic lymph nodes and allows to perform single-port extraperitoneal para-aortic lymphadenectomy by reducing entry-related risks such as peritoneal tears or gas leakage during abdominal port insertion.

This video demonstrates when indicated combination of vNOTES and single-port laparoscopy could be feasible for performing bilateral pelvic and para-aortic lymphadenectomy in high-grade endometrial cancer patients.

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Contributors BC: data collection, writing, critical review, guarantor. SA: data collection, critical review. OA: data collection, critical review. CK: writing, critical review.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Consent obtained directly from patient(s).

Ethics approval This study involves human participants but ethics committee exemption was obtained. A consent form was obtained from the patient. Participants gave informed consent to participate in the study before taking part.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement All data relevant to the study are included in the article or uploaded as supplementary information.

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