

Vaginal hysterectomy combined with transvaginal natural orifice transluminal endoscopic surgery bilateral adnexectomy: a case report

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Abstract

This current case report describes an elderly woman with pyometra that underwent successful vaginal hysterectomy and transvaginal natural orifice transluminal endoscopic surgery (vNOTES) bilateral adnexectomy after conservative anti-inflammatory drug treatment. The patient had a history of transvaginal delivery so this approach was considered the most appropriate. To the best of our knowledge, this is the first report to investigate the use of vaginal hysterectomy and vNOTES bilateral adnexectomy in an elderly patient with pyometra. The necessary steps to the procedure are shown in a narrated instructional video.

Keywords

Transvaginal natural orifice transluminal endoscopic surgery, vNOTES, vaginal hysterectomy, bilateral adnexectomy, pyometra, case report

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Introduction

There are three surgical approaches that can be used to undertake a hysterectomy including abdominal hysterectomy, vaginal hysterectomy and laparoscopic hysterectomy.¹ Transvaginal hysterectomy is more suitable for women that have a history of vaginal delivery.² Salpingo-oophorectomy

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via the vagina may be difficult and increase the risk of surgery because of the higher and deeper position of the adnexa, so this technique requires an experienced surgeon.³

Transvaginal natural orifice transluminal endoscopic surgery (vNOTES) is characterized by a quick postoperative recovery and reduced surgical trauma.⁴ Recent studies have reported the use of vNOTES in the treatment of benign gynaecological diseases such as hysterectomy,^{5,6} myomectomy⁷ and adnexectomy.⁸ The use of vNOTES is the recommended surgical method for adnexectomy,⁸ because the ovaries and bilateral appendages are more easily removed using this surgical technique.⁹ The present case report describes a postmenopausal woman with pyometra that underwent successful vaginal hysterectomy and vNOTES for the removal of the bilateral appendages.

Case report

An 83-year-old woman that had been postmenopausal for 37 years was admitted to the Department of Obstetrics and Gynaecology, The Affiliated Hospital of Guizhou Medical University, Guiyang, Guizhou Province, China in April 2019. She was treated with anti-inflammatory drugs because of a history of abdominal pain for 1 month and pyometra for more than 10 days. The patient requested surgical treatment after the symptoms had been relieved. There was no abnormal medical, family or psychosocial history including relevant genetic information. Ultrasonography identified pyometra and left lateral hydrosalpinx. The patient had a history of transvaginal delivery.

The patient underwent a vaginal hysterectomy combined with vNOTES to remove the bilateral appendages with lysis of any associated adhesions because she lived in a remote area with poor medical provision and follow-up would be difficult. Entry was made via the anterior vaginal fornix

using a circular incision. Ligatures were used to resect the utero-sacral ligament and cardinal ligament. The pus was drained from the uterine cavity with a suction tube and the uterus was removed. To gain good exposure, adhesions were separated using a bipolar slotted grasper between partial bowel and omentum after transvaginal placement of the port. All fibrotic tissues were excised with the bipolar slotted grasper to minimize additional damage to surrounding tissues. The bilateral appendages were excised using a bipolar ultrasonic knife. On laparoscopic examination, no obvious bleeding was observed in the vaginal stump. After cleaning with normal saline, the vaginal stump was repaired using continuous 2-0 coated sutures. A vaginal T tube was placed in the vaginal stump for several days. The total operation time was approximately 80 min with a low estimated blood loss of 5 ml. The recovery course was uneventful and the patient returned to normal function after the vaginal T tube had been removed.

This case report and the instructional video were approved by the Ethics Review Committee of The Affiliated Hospital of Guizhou Medical University, Guiyang, Guizhou Province, China (no. 2018[146]) and the report complied with relevant CARE guidelines for case reports. Written informed consent for treatment and for publication of this case report was obtained from the patient.

Discussion

This current case report describes an elderly postmenopausal woman that experienced ongoing pyometra after treatment with anti-inflammatory drugs for whom follow-up would be difficult because she lived in a remote area with poor medical provision. The most appropriate treatment for this patient was vaginal hysterectomy combined with vNOTES to remove the bilateral

appendages. The patient had a history of transvaginal delivery, which is better for undertaking a vaginal hysterectomy and draining the pus from the uterus. However, it can be difficult to remove the ovaries and oviducts because of the higher and deeper position of the adnexa. Vaginal hysterectomy combined with vNOTES bilateral adnexectomy not only reduces surgical trauma and surgical complications, but also permits the comprehensive exploration of the abdominal cavity, which was a more suitable treatment for the current patient. The findings from this current case suggest that vNOTES might provide a safe, minimally-invasive method for bilateral adnexectomy, especially in older women with pyometra that need radical surgery. The necessary steps to conduct a successful vaginal hysterectomy and vNOTES bilateral adnexectomy in patients with pyometra are shown in the instructional video (Video 1).

Author contributions

Conception and study design: all authors; data collection (H.Y., M.Y. & D.Z.); data analysis and interpretation (all authors); surgeon or imager (H.Y. & D.Z.).


Declaration of conflicting interest

The authors declare that there are no conflicts of interest.

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References

1. Nieboer TE, Johnson N, Lethaby A, et al. Surgical approach to hysterectomy for benign gynaecological disease. *Cochrane Database Syst Rev* 2009;(3):CD003677.
2. Wasson M, Butler K, Magtibay P, et al. Prognostic Factors for Morcellation During Vaginal Hysterectomy. *Obstet Gynecol* 2016; 127: 752–757.
3. Agostini A, Bretelle F, Cravello L, et al. Vaginal hysterectomy in nulliparous women without prolapse: a prospective comparative study. *BJOG* 2003; 110: 515–518.
4. Li CB and Hua KQ. Transvaginal natural orifice transluminal endoscopic surgery (vNOTES) in gynecologic surgeries: A systematic review. *Asian J Surg* 2020; 43: 44–51.
5. Baekelandt JF, De Mulder PA, Le Roy I, et al. Hysterectomy by transvaginal natural orifice transluminal endoscopic surgery versus laparoscopy as a day-care procedure: a randomised controlled trial. *BJOG* 2019; 126: 105–113.
6. Nulens K, Bosteels J, De Rop C, et al. vNOTES hysterectomy for large uteri: a retrospective cohort study of 114 patients. *J Minim Invasive Gynecol* 2020: S1553-4650 (20)31083-9.
7. Baekelandt J. Transvaginal natural-orifice transluminal endoscopic surgery: a new approach to myomectomy. *Fertil Steril* 2018; 109: 179.
8. Baekelandt JF, De Mulder PA, Le Roy I, et al. Transvaginal natural orifice transluminal endoscopic surgery (vNOTES) adnexectomy for benign pathology compared with laparoscopic excision (NOTABLE): a protocol for a randomised controlled trial. *BMJ Open* 2018; 8: e018059.
9. Karkia R, Giacchino T, Taylor J, et al. Hysterectomy and adenectomy via transvaginal natural orifice transluminal endoscopic surgery (vNOTES): A UK perspective with a case series of 33 patients. *Eur J Obstet Gynecol Reprod Biol* 2019; 242: 29–32.