

Radiofrequency-induced endometrial ablation for the treatment of postpartum hemorrhage after vaginal delivery

Case report

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Abstract

Rationale: Postpartum hemorrhage is a common complication and difficult problem in obstetrics. Radiofrequency-induced endometrial ablation (RFIEA) widely used in abnormal uterine bleeding and achieved good effects. This article will investigate the effect of RFIEA for treatment of postpartum hemorrhage.

Patients concerns: A 26-year-old healthy full-term parturient woman presented with postpartum hemorrhage after vaginal delivery for 11 hours, who was ready to emergency surgery (hysterectomy) 7 hours after inserting an intrauterine balloon into uterine cavity.

Diagnoses: Blood loss after vaginal delivery was more than 500 mL during 11 hours in the full-term parturient woman.

Intervention: We applied RFIEA to treatment of postpartum hemorrhage. With the patient in dorsal lithotomy position, we advanced the disposable device according to the instruction and operated the Novasure system in semi-automatic mode.

Outcomes: There was no obvious endometrial bleeding found with hysteroscopy at the end of surgery. No complications (such as thermal injury to adjacent tissue, uterine perforation, bowel perforation) were observed.

Lessons: It is safe and effective to treat postpartum hemorrhage after vaginal delivery using RFIEA.

Abbreviations: AUB = abnormal uterine, RFIEA = radiofrequency-induced endometrial ablation.

Keywords: postpartum hemorrhage, radiofrequency-induced endometrial ablation, treatment, vaginal delivery

1. Introduction

The uterus is very important to woman. It has the characteristics of menstruation, reproduction, endocrine and immune function so on. However, many women have a hysterectomy because of various gynecological diseases, and 10% to 30% of these women have a hysterectomy because of abnormal uterine bleeding (AUB). Novasure (Hologic, Inc., Marlborough, MA), radiofrequency-induced endometrial ablation (RFIEA), widely used in AUB and achieved good effects.^[1-3]

If it was inefficient or failure for women with insertion of intrauterine balloon and drug therapy, could we apply RFIEA to treatment of postpartum hemorrhage? This study attempted to apply RFIEA to treatment of postpartum hemorrhage, and achieved satisfactory effect with short operation time, minimally invasive wound, and quick recovery.

2. Case report

This study was approved by the Hospital Ethics Committee of Jiaying women and children's hospital (Chairman Prof L. Xia) on January 9, 2017 and informed consent was obtained. A 26-year-old full-term primipara presented with postpartum hemorrhage after vaginal delivery for 11 hours because of uterine atony. Removal of reproductive tract trauma and placental factors, we inserted an intrauterine balloon into uterine cavity under epidural anesthesia 7 hours ago, but the treatment was ineffective. In that condition, we were ready to emergency surgery (hysterectomy) and sent the patient to operating room. Taking into account the patient's strong demand for preserving the uterus, we tried to apply RFIEA to treatment of postpartum hemorrhage. With the patient in dorsal lithotomy position, first, we inserted a speculum into vagina and grasped the cervix with a tenaculum. Secondly, opened the sterile Novasure disposable device package and assembled the Novasure system. Lastly, we placed the disposable device with connecting cord into the sterile field while being careful to keep the nonsterile suction line desiccant box out of the sterile field, then advanced the disposable device until the distal end of the sheath touches the fundus by holding the front handle.

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We manipulated the Novasure device according to the instruction. As uterine cavity was very large, we did not measure the length and width of uterine cavity, operated the Novasure system in semi-automatic mode and did it repeatedly if need. There was no obvious endometrial bleeding with hysteroscopy at the end of surgery. No complications (such as thermal injury to adjacent tissue, uterine perforation, bowel perforation) were observed.

3. Discussion

The traditional treatments of postpartum hemorrhage after vaginal delivery include inserting balloon into the uterine cavity, and interventional therapy, even hysterectomy. However, traditional surgical procedure (hysterectomy) has characteristics of a longer operative time and slower recovery, and more postoperative complications,^[4,5] which has effects on endocrine and sexual function. We applied RFIEA to treatment of postpartum hemorrhage, and achieved satisfactory effect with short operation time, minimally invasive wound and quick recovery.

4. Conclusion

It is safe and effective to treat postpartum hemorrhage after vaginal delivery using RFIEA. It provides a new method for treatment of postpartum hemorrhage.

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