

The suture fixation of levonorgestrel-releasing intrauterine device using the hysteroscopic cold-knife surgery system: an original method in treatment of adenomyosis

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Objective: To introduce an effective approach using the hysteroscopic cold-knife surgery system (HCSS) for suture fixation of the levonorgestrel-releasing intrauterine device (LNG-IUD) in patients with adenomyosis.

Design: Video description of the surgical procedures to demonstrate the detailed technique. The study was reviewed and approved by the institutional review board of Hangzhou Women's Hospital.

Setting: Maternity hospital.

Patient(s): A 39-year-old woman diagnosed with adenomyosis had endured 7 years of severe dysmenorrhea and 4 years of heavy menstrual bleeding. She had a past medical history that was significant for expulsion of an LNG-IUD. Transvaginal ultrasonography revealed that her uterus was enlarged by adenomyosis. She insisted on preserving fertility potential.

Intervention(s): We proceeded with the HCSS and the uterine cavity was found enlarged significantly. In consideration of the patient's strong desire for maintaining fertility options, the fixation of the LNG-IUD on the intrauterine posterior wall with an Ethibond suture was performed successfully through an endoscopic needle driver and a knot-pushing device. Proficient endoscopic suturing is the key to the technique. Informed consent was obtained from the patient.

Main Outcome Measure(s): Feasibility and value of using the HCSS to fix an LNG-IUD for treatment of adenomyosis.

Result(s): The LNG-IUD was fixed successfully by the HCSS with an Ethibond suture on the posterior wall of the uterus within 30 minutes, and the intraoperative blood loss was 2 mL. The patient was discharged 24 hours postoperatively without any adverse perioperative complications. At the one-year follow-up, the patient reported obvious relief of her dysmenorrhea and menorrhagia and no more experience with expulsion. Ultrasound demonstrated normal position of the IUD at 1, 3, 6, and 12 months postoperatively.

Conclusion(s): Hysteroscopy presents a clear visual field to locate and fix the IUD. In patients with adenomyosis suffering from dysmenorrhea or excessive menstrual blood loss, suture fixation of the LNG-IUD using the HCSS can be a minimally invasive and effective alternative for treating adenomyosis, especially in patients who have previously expelled an LNG-IUD, preventing the risk of expulsion.

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El resumen está disponible en Español al final del artículo.

Key Words: Adenomyosis, hysteroscopic cold-knife surgery system, levonorgestrel-releasing intrauterine device, fixation



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SUGGESTED READING

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La fijación mediante sutura del dispositivo intrauterino liberador de levonorgestrel empleando el sistema histeroscópico de bisturí frío: un método original en el tratamiento de la adenomiosis.

Objetivo: Introducir un enfoque efectivo empleando el sistema histeroscópico de bisturí frío (HCSS) para la fijación mediante sutura del dispositivo intrauterino liberador de levonorgestrel (LNG-IUD) en pacientes con adenomiosis.

Diseño: Video-descripción de los procedimientos quirúrgicos para demostrar la técnica detalladamente. El estudio fue revisado y aprobado por el comité de revisión institucional del Hangzhou Women's Hospital.

Marco: Maternidad hospitalaria.

Pacientes: Mujer de 39 años diagnosticada con adenomiosis que ha sufrido de dismenorrea durante y de menorragia durante 4 años. Tenía una historia clínica significativa por expulsión de LNG-IUD. Una ecografía transvaginal reveló que el útero estaba agrandado por la adenomiosis. La paciente insistió en mantener su capacidad reproductiva.

Intervenciones: Procedimos con el HCSS y se apreció que la cavidad uterina estaba significativamente agrandada. En consideración del fuerte deseo de la paciente de mantener sus opciones de fertilidad, la fijación del LNG-IUD a la pared posterior intrauterina con sutura Ethibond se realizó con éxito empleando un porta-agujas endoscópico y un empujador de nudos. La competencia en la sutura endoscópica es la clave de esta técnica. Se obtuvo consentimiento informado de la paciente.

Principales medidas de resultados: Plausibilidad y valor del uso de HCSS para fijar un LNG-IUD para el tratamiento de la adenomiosis.

Resultados: El LNG-IUD fue fijado con éxito a la pared intrauterina posterior mediante el HCSS con una sutura Ethibond en 30 minutos y el sangrado intraoperatorio fue de 2 mL. La paciente fue dada de alta 24 horas después de la operación sin complicaciones postoperatorias. En la visita de seguimiento un año después, la paciente informó de un evidente alivio de su dismenorrea y menorragia y no había sufrido la expulsión del LNG-IUD. Una ecografía demostró el posicionamiento normal del IUD 1, 3, 6 y 12 meses después de la cirugía.

Conclusiones: La histeroscopia presenta un campo visual claro para localizar y fijar el IUD. En pacientes con adenomiosis que sufren de dismenorrea o sangrado menstrual excesivo, la fijación mediante sutura del LNG-IUD usando el HCSS puede ser una alternativa mínimamente invasiva y efectiva para tratar la adenomiosis, especialmente en pacientes que han tenido una expulsión previa de un LNG-IUD, previniendo el riesgo de expulsión.