



## Two Paths of Suture Fixation for Levonorgestrel-Releasing Intrauterine Devices Under Hysteroscopy

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### Abstract

For patients with adenomyosis who are treated with a levonorgestrel-releasing intrauterine device (LNG-IUD), is there a better way to keep LNG-IUD from falling off? This paper introduced two ways to suture fixation of LNG-IUD under hysteroscopy. One way was to use the instrument channel in the hysteroscopic cold-knife surgery system (Zhu et al. in *Fertil Steril* 116:1191–1193, 1), and the other way was to enter the uterine cavity from the side of the hysteroscope. A video description of the surgical procedure demonstrates the detailed technique. We sutured the LNG-IUD in two different ways as shown in the video. One method was to suture with a 3 mm needle holder through the operating channel; another option was to suture from the bypass. After the intrauterine suture, the suture needle was pulled out, and the middle part of the thread was tied to the top of the LNG-IUD. The knot was tied with a knot push device, and the hysteroscopy was performed again to determine the position of the knot and LNG-IUD, and the end of the suture was cut 1 cm from the knot. Case 1: A 42-year-old patient, gravida 4, para 2, underwent hysteroscopy 1 year ago due to adenomyosis. Postoperative pathology was endometrial hyperplasia. She was treated with LNG-IUD but unfortunately fell off twice due to cervical insufficiency. Case 2: A 47-year-old patient, gravida 3, para 2, was admitted to LNG-IUD 1 year ago because of adenomyosis, and the volume of menstruation decreased. The LNG-IUD fell off 3 months ago, and the LNG-IUD moved down after re-admission. LNG-IUD was successfully sutured and fixed in the intrauterine cavity in both patients within 30 min. The distending media of these two paths were 4000 ml and 6000 ml, respectively. The mean blood loss was about 5 ml for both patients, and they left the hospital after 2 h of observation. The menstrual volume of these two patients decreased, and the ultrasound showed that the LNG-IUD was in the right position at 1 and 3 months postoperatively. For patients with adenomyosis who have previously lost the LNG-IUD, these two methods of LNG-IUD fixation under hysteroscopy are both reliable to avoid the risk of the LNG-IUD being discharged again. The bypass method for LNG-IUD suture requires only an intrauterine laparoscope, which requires less instrumentation but higher suture skills.

**Keywords** Adenomyosis · Fixation · Hysteroscopy · Levonorgestrel-releasing intrauterine device

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## Declarations

**Consent for Publication** The authors confirmed that they provided informed consent for the release of images and videos to the patients.

**Competing Interests** The authors have no competing interests.

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