



Transcervical Hysteroscopic Resection of Endometrial Stromal Nodule (SEN): Fertility Preservation Approach

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Abstract

Case of a 30-year-old childless patient with intermenstrual uterine bleeding and moderate dysmenorrhea, initially diagnosed with a 4 cm type 0 submucosal fibroid by 2D ultrasound. A transcervical myomectomy was scheduled by bipolar resectoscopy; however, the definitive diagnosis was an Endometrial Stromal Nodule (SEN), determined after postoperative histopathological evaluation. The purpose of the treatment is to preserve her uterus and improve the patient's quality of life.

Keywords: Endometrial Stromal Nodule (SEN); Ultrasound

Introduction

Endometrial Stromal Nodule (SEN) is a rare benign uterine mesenchymal neoplasm that can recur if it is not completely resected. These nodules account for less than 2% of uterine mesenchymal neoplasms and usually occur in women of reproductive age [2].

In our case, the initial diagnosis was submucosal fibroid type 0, which led to surgical planning. However, the definitive finding was obtained thanks to the post-surgical pathological study, highlighting its crucial role in the precise identification of the type of lesion.

Case Presentation

- **Patient:** A 30-year-old woman without children.
- **Reason for consultation:** Intermenstrual uterine bleeding associated with moderate dysmenorrhea.

Preoperative evaluations

- **2D transvaginal ultrasound and hysterosonography:** These were useful to delimit the lesion, determine its size, location and extent, confirming an initial diagnosis of type 0 submucosal fibroid.
- **Lasmar's STEPWISE classification:** Score of 4, indicating feasibility for transcervical approach [1].
- **Surgical plan:** Transcervical myomectomy with bipolar resectoscope.

Operation

- **Anesthesia:** Subdural block.

Preoperative preparation

- **Misoprostol:** 200 mcg administered transcervically 12 hours before the procedure to facilitate cervical dilation.

Progressive cervical dilation with Hegar up to number 10 for introduction of a 29 French bipolar resectoscope.

Intraoperative techniques

- **Water control:** Use of gravity pressure gradient, since there was no endomat pump. This method allowed to maintain adequate visual control during the procedure.

- **Bipolar electro-surgical unit:** Endocut mode configuration (90 watts), adjusted to the impedance of the tissue.
- **Controlled movements:** “slide”, “bow and arrow”. Handle activation only under direct vision.
- Progressive resection with tunneling technique and orientation towards the operator.
- Removal of fragments (“chips”) to maintain a clear field of vision.
- **Total duration:** 45 minutes.
- **Intraoperative water balance:** 1000 ml.

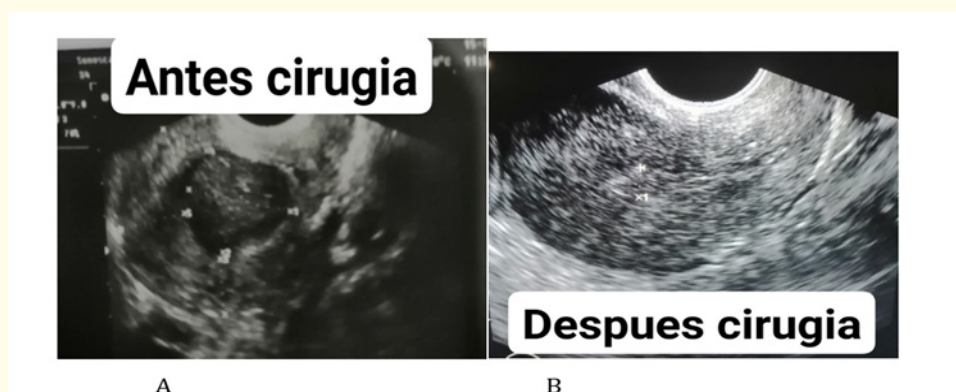


Figure A: Cross-section of the uterus where a well-circumscribed nodular image is evident.

Figure B: Sagittal cut of the uterus after the procedure.

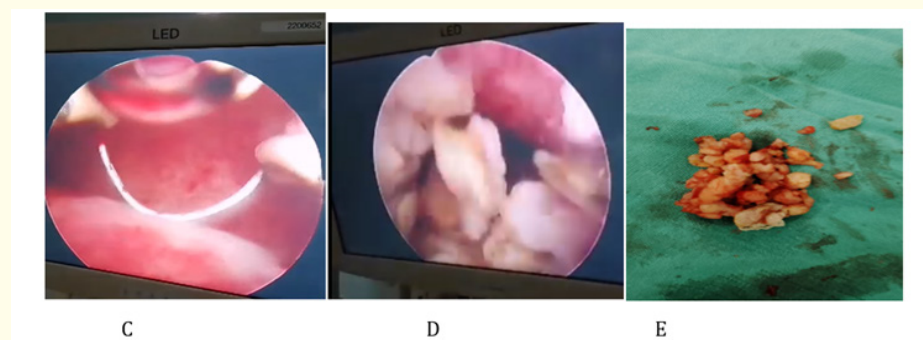


Figure C, D and E: Hysteroscopic appearance of the nodular lesion. Resected chips.

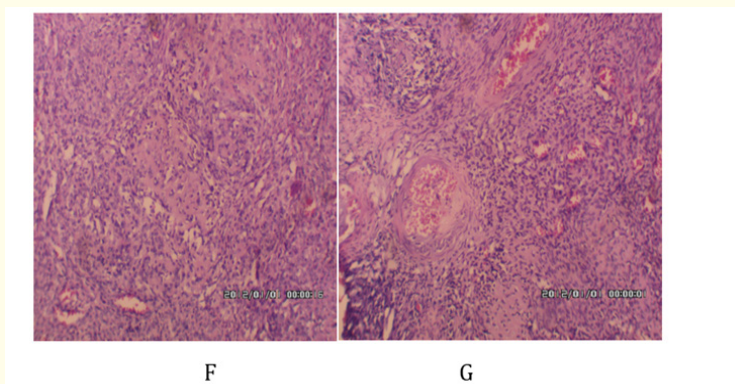


Figure F and G: Histological section revealing monotonous proliferation of soft endometrial stromal cells, with expansive growth pattern. With proliferation of prominent arterioles [4].

Conclusion

Transcervical bipolar resectoscopy is an effective and safe technique for the treatment of endometrial stromal nodules (SEN), particularly in patients who wish to preserve their fertility [5].

The use of saline solution as a means of relaxation, the precision in the handling of the bipolar electrosurgical unit, and the adaptation of the procedure to the available equipment were crucial for the success of the intervention. Fertility preservation and adequate resection of the nodule contribute to a good prognosis for the patient.

Evidence-based recommendations

Comprehensive preoperative evaluation

Use of 3D ultrasound: According to the American College of Obstetricians and Gynecologists (ACOG), the use of three-dimensional (3D) ultrasound is superior to 2D for the visualization of intra-uterine lesions, as it allows for a more accurate assessment of the size, location and relationship with the serosa (ACOG, 2020) [6].

Diagnostic hysteroscopy

According to the European Society of Human Reproduction and Embryology (ESHRE), diagnostic hysteroscopy is essential to determine the morphology of the lesion and surgical planning.

Avoiding incomplete resection is crucial.

The guidelines recommend direct visualization and the use of the appropriate “chip” extraction technique to prevent residual tissue from causing recurrences. Work should be done under direct vision at all times and fragments should be removed immediately after resectioning (ESHRE, 2017) [7].

Postoperative follow-up

Close postoperative monitoring: Close postoperative follow-up is recommended to evaluate for signs of complications such as uterine perforation or nodule recurrence. ACOG and ESHRE guidelines suggest performing a follow-up hysteroscopy 3-6 months after resection to confirm complete removal of endometrial tissue and observe uterine repair (ACOG, 2020).

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