

# Hysteroscopic Removal of Intrauterine-retained Suture Material Causing Pelvic Inflammatory Disease

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## Abstract

Retained intrauterine objects are rare causes of persistent vaginal discharge and pelvic inflammatory disease. Hysteroscopy is a minimally invasive technique used for removing these materials. A 47-year-old female who had recurrent vaginal discharge was admitted to our emergency department with pelvic pain. Retained nonabsorbable suture material was observed during her vaginal examination. After treating with intravenous antibiotics, operative hysteroscopy was performed, and the material was removed from the lower segment of the uterus.

**Keywords:** Hysteroscopy, pelvic inflammatory disease, sutures

## INTRODUCTION

In addition to obstetric complications, the frequency of gynecological complications increases day by day due to the increasing cesarean rates.<sup>[1]</sup> The proper closure of uterine incision is a critical step in the cesarean section to prevent possible complications such as bleeding, hematoma, and dehiscence.<sup>[2]</sup> The most commonly used type of suture material for the closure of uterine incision is vicryl, which is an absorbable, synthetic, and braided suture that is widely used for soft-tissue approximation. Regarding the suture characteristics, suture degradation may vary depending on the type of suture material.<sup>[3]</sup> Complete absorption of suture usually occurs as a result of hydrolysis within 56–70 days.

Foreign bodies observed in the uterine cavity may change the endometrial microarchitecture and cause menstrual disorders, infertility, lower abdominal pain, purulent vaginal discharge, and sexual problems.<sup>[4]</sup> Till date, parts of intrauterine devices (IUDs), residual pregnancy products, fetal bone fragments, surgical gauzes, and nonabsorbable suture materials have been found in the uterine cavity.<sup>[4]</sup>

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In this report, we present the hysteroscopic management of a nonabsorbable suture material that caused pelvic inflammatory disease.

## CASE REPORT

A 47-year-old female was admitted to our emergency department with complaints of chronic pelvic pain and persistent yellowish-malodorous vaginal discharge. She had three cesarean sections, and the last one was 12 years before, and she did not have any other previous surgery. She had amenorrhea for the last 6 months on admission. Her medical history was uneventful, but she had complaints of vaginal discharge that were unresponsive to oral and vaginal treatments for many years.

In her bimanual gynecological examination, there was bilateral adnexal tenderness. The speculum examination revealed a 2 cm long blue–green suture material protruding from the cervical ostium accompanying yellowish vaginal

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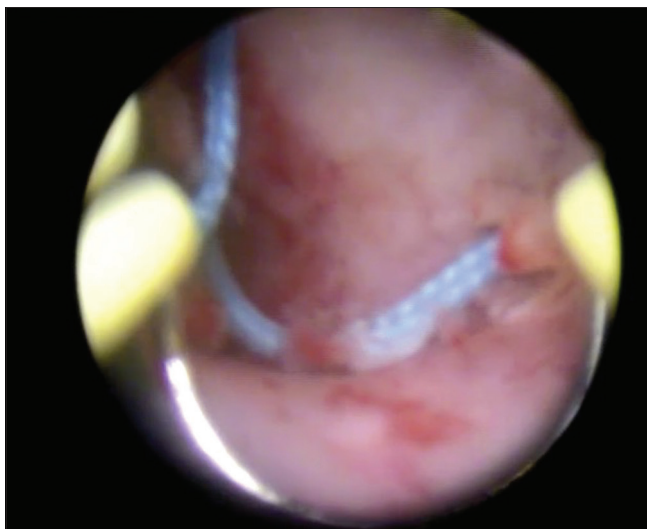
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fluid. Her body temperature was 37.8°C, and her white blood cell count was  $13 \times 10^3$ . A transvaginal ultrasound revealed a small amount of free fluid in the pouch of Douglas. After commencing intravenous antibiotic therapy, an operative hysteroscopy under laryngeal mask anesthesia was planned for the patient due to an intolerance of any interventions in office settings. The patient laid in the dorsal lithotomy position, and a vaginal speculum was placed. The cervix was grasped with a tenaculum and dilated with Hegar dilators.

The uterine cavity was explored with a 0° optical hysteroscope (Karl Storz Endoscopy, Tuttlingen, Germany), and a 10 cm suture material, arising from the left uterine lower segment, was observed. The suture material was grasped, taken out of the cervical ostium, and cut with scissors to achieve a better visualization.

Then, the intrauterine part of the suture material was entirely resected by removing a small portion from myometrial tissue of the lower uterine segment, which it originated with the help of hysteroscopic resectoscope [Figures 1 and 2]. The suture material was thought to be a polyester nonabsorbable suture resembling an Ethibond® suture. The surgery was completed within about 7 min, and she received 3 days of intravenous antibiotic treatment. Her postoperative care was uneventful, and she was discharged with an oral antibiotic prescription. Written informed consent was obtained from the patient to present his images and clinical information. This article was written after receiving the information from the Institutional Review Board of Bakırköy Dr. Sadi Konuk Training and Research Hospital that it was sufficient to obtain written informed consent to publish patients' data anonymously and was exempt from board approval.



**Figure 1:** Hysteroscopic appearance of the nonabsorbable retained suture material

## DISCUSSION

Till date, a variety of intrauterine foreign materials, such as cervical cerclage sutures, surgical gauzes, retained fetal bones, and forgotten parts of intrauterine contraceptive devices, have been reported in the literature. These materials have been accused of causing unintended conditions such as infertility, vaginal discharge, chronic pelvic pain, and pelvic inflammatory disease. Abduljabbar and Sbenati reported the removal of a foreign body from the uterine cavity, causing infertility and persistent vaginal discharge lasting for 13 years.<sup>[5]</sup> Leela reported that a retained cervical cerclage suture, placed 15 years ago, was caused to secondary infertility and abnormal uterine bleeding.<sup>[6]</sup> Khan *et al.* reported the hysteroscopic removal of fetal bone fragments of a patient with a history of a 12-week pregnancy termination 10 years ago, who had complaints of chronic pelvic pain and bloody vaginal discharge for 8 years.<sup>[7]</sup> Other case studies also have similar characteristics. Xia *et al.* reported two cases with persistent menstrual irregularities after cesarean sections, and retained intrauterine nonabsorbable sutures were thought to be the reason for their complaints.<sup>[4]</sup> Nilsson *et al.* presented the management of a patient who had chronic pelvic pain and recurrent vaginal discharge for 10 years and with a history of second-trimester pregnancy termination using multiple laminaria insertions. The hysteroscopic examination of the patient revealed a retained intrauterine laminaria, and the patient was entirely cured after hysteroscopic removal of the material.<sup>[8]</sup>

Hysteroscopy is a minimally invasive approach for the diagnosis and management of gynecologic problems associated with the uterine cavity. The use of hysteroscopy in patients with suspected foreign body offers the opportunity to perform surgical treatment simultaneously, as well as evaluation of the uterine cavity. In 1994, Kazakov



**Figure 2:** Nonabsorbable suture material after hysteroscopic removal

*et al.* reported hysteroscopic removal of foreign bodies in 69 patients with retained intrauterine foreign bodies. Sixty-one of the patients were with IUDs, and eight of them had fetal bone fragments. Hysteroscopic removal of sutures found in the uterine scars due to previous cesarean sections were carried out only in two patients.<sup>[9]</sup> In our case, a nonabsorbable suture material thought to cause pelvic inflammatory disease and was removed through hysteroscopy. As a minimally invasive surgery, hysteroscopy allows patients to have an early postoperative recovery period and early discharge.

Obstetricians usually use absorbable sutures to close hysterotomy in the cesarean section.<sup>[10]</sup> Using a nonabsorbable suture for hysterotomy closure may lead to foreign body reactions. In our case, we think that the surgeon used a suture that could not be absorbed without knowing the properties of the material during hysterotomy closure.

To sum up, retained intrauterine foreign bodies should be kept in mind for patients with recurrent vaginal discharge, unexplained chronic pelvic pain, and treatment-resistant abnormal uterine bleeding. In the era of minimal access surgery, hysteroscopy should be considered for persistent complaints mentioned above to prevent unnecessary interventions.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published, and due efforts

will be made to conceal identity, but anonymity cannot be guaranteed.

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### Conflicts of interest

There are no conflicts of interest.

### REFERENCES

1. Silver RM, Landon MB, Rouse DJ, Leveno KJ, Spong CY, Thom EA, *et al.* Maternal morbidity associated with multiple repeat cesarean deliveries. *Obstet Gynecol* 2006;107:1226-32.
2. Bamberg C, Dudenhausen JW, Bujak V, Rodekamp E, Brauer M, Hinkson L, *et al.* A Prospective Randomized Clinical Trial of Single vs. Double Layer Closure of Hysterotomy at the Time of Cesarean Delivery: The Effect on Uterine Scar Thickness. *Ultraschall Med* 2018;39:343-51.
3. Köstü B, Ercan Ö, Özer A, Bakacak M, Özdemir Ö, Avcı F. A comparison of two techniques of uterine closure in caesarean section. *J Matern Fetal Neonatal Med* 2016;29:1573-6.
4. Xia E, Duan H, Huang X, Zheng J, Yu D, Cheng L. Hysteroscopic removal of foreign bodies and its method of monitoring. *Chin Med J (Engl)* 2003;116:125-8.
5. Abduljabbar HS, Sbenati MA. Neglected intra-cervical bizarre foreign object. *Saudi Med J* 2012;33:1343-5.
6. Leela KP. Cervical circlage suture presenting as foreign body uterus-case report. *Austin J Clin Case Rep* 2014;1:1060.
7. Khan S, Anwar A, Jetley S. Retained Fetal Bones: An Unusual Cause of Granulomatous Reaction on Papanicolaou Smear. *J Midlife Health* 2018;9:162-4.
8. Nilsson W, Mikhael S, Kaplan J. Chronic Pelvic Pain and Infertility Resulting from Unrecognized Retained Laminaria. *Case Rep Obstet Gynecol.* 2017;2017:1-3.
9. Kazakov BJ, Khankoev IM, Pererva VV. Results of Hysteroscopic Method of Foreign Body Removal out of Uterus Cavity *J Am Assoc Gynecol Laparosc* 1994;1:S16.
10. CORONIS Collaborative Group, Abalos E, Addo V, Brocklehurst P, El Sheikh M, Farrell B, *et al.* Caesarean section surgical techniques: 3 year follow-up of the CORONIS fractional, factorial, unmasked, randomised controlled trial. *Lancet* 2016;388:62-72.