



Adhesion Barrier Gel for Intrauterine Surgery



## CASE REPORT

### Hysteroscopic Treatment of Retained Products of Conception



**Dr. Adolpho Kelm**

São Paulo, Brazil

- Coordinator of Hysteroscopy in the Gynecological Endoscopy and Endometriosis Sector of Hospital Santa Casa de São Paulo
- Member of the Hysteroscopy Committee of the Brazilian Society of Endometriosis and Minimally Invasive Surgery

#### Case Introduction

The patient is a healthy 39-year-old with regular menstrual cycle flow and a desire to conceive.

#### Case Presentation

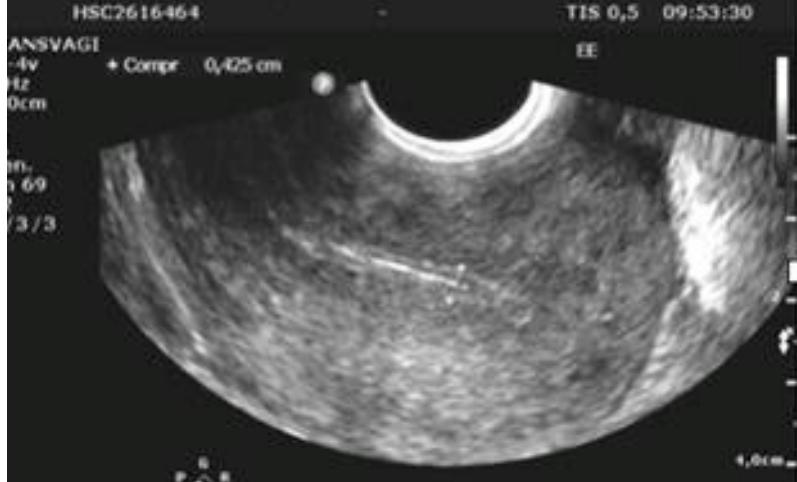
In February 2023, the patient underwent uterine curettage after a 9-week miscarriage. The procedure was uneventful. After hospital discharge, the patient experienced increased vaginal bleeding containing clots and required up to five pads per day.

BetaHCG levels were negative. A transvaginal pelvic ultrasonography image suggested residual products of conception. Thus, the patient underwent a second uterine curettage in April 2023, after which her bleeding continued to be excessive.

#### Physical Exam:

The patient was hemodynamically stable, with no change in the abdominal examination. The gynecological exam showed a small amount of vaginal bleeding through the cervical orifice. Upon vaginal examination, a retroverted uterus was found, slightly increased in volume, with preserved mobility, and a fibroelastic cervix.

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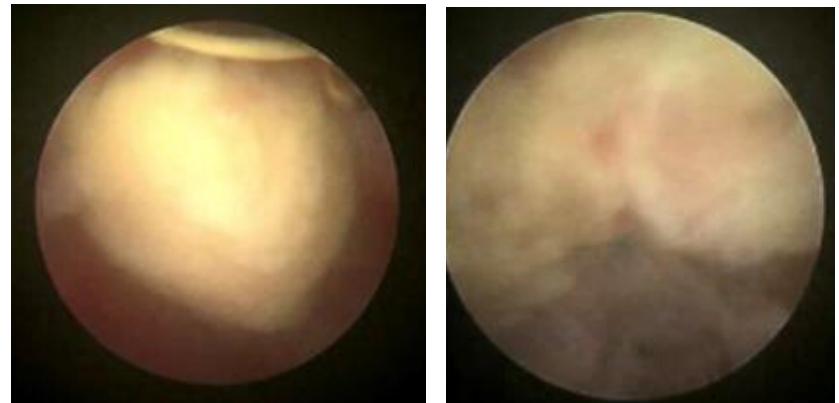
Diagnostic hysteroscopy showed:  
 "Cervical canal without alterations, endometrial cavity of normal size, regular shape, tubal ostium viewed bilaterally, atrophic endometrium, typical vascularization. Presence of amorphous material suggestive of ovular remains in the cavity, especially in the anterior wall. Diagnostic impression: ovular remains".  
 The biopsy of the contents was compatible with the findings.



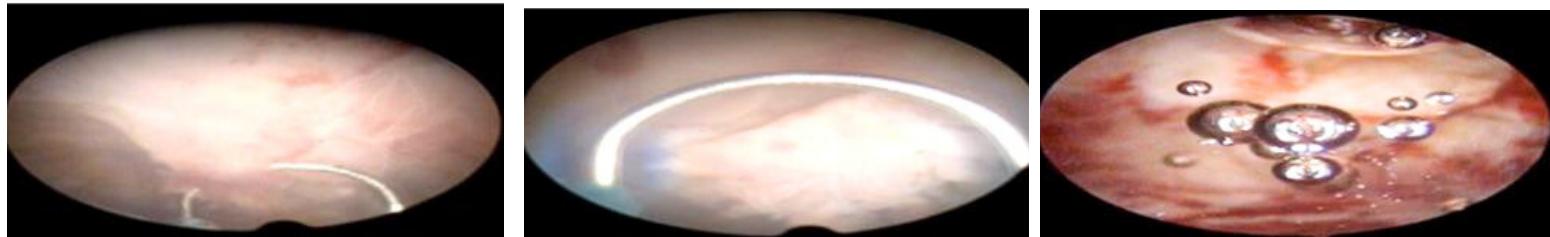
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### Additional Exams

The beta HCG value was negative. Transvaginal Doppler pelvic ultrasound performed in July 2023 revealed: "Uterus in RVF, typically shaped and contours regular. Uterine measurements of 7.4 x 5.5 x 4.7cm, vol 100 cc. The uterine cavity containing heterogeneous material, predominantly hyperechogenic without vascularization and nonspecific findings consistent with retained products of conception. Other parts of the exam without changes."



### Operative Approach



A hysteroscopy was performed in July 2023 to remove the contents; The procedure was uneventful. Bipolar energy was used with a loop electrode and 0.9% saline distension medium. The procedure lasted ten minutes, and the water balance was 300ml. At the end of the procedure, Oxiplex/IU® Adhesion Barrier Gel (FzioMed, San Luis Obispo, CA, USA) was inserted to reduce the formation of intrauterine adhesions. The patient recovered without recurrence of excessive vaginal bleeding in the postoperative period.

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### Follow-up

The patient underwent a diagnostic hysteroscopy four weeks after the procedure, which showed a uterine cavity without adhesions.

### Case Conclusion

Uterine curettages of retained products of conception are high-risk procedures for the formation of intrauterine synechiae. In many places in our country, uterine curettage is still the only treatment option addressing products retained from conception. Measures that prevent the formation of intrauterine adhesions will benefit patients who undergo intrauterine procedures and desire a reproductive future. Thus, using Oxiplex/IU Adhesion Barrier Gel is an option to consider to reduce intrauterine adhesions after curettage.

### Discussion of Adhesions

Intrauterine adhesions, also called synechiae, consist of the formation of fibrotic tissue inside the uterus, secondary to trauma generated in surgical procedures or infections. In 1950, Asherman described adhesions as a consequence of uterine curettages that led to menstrual changes such as amenorrhea or hypomenorrhea. They can also cause subfertility, infertility, and gestational losses.

Any intrauterine surgery may precipitate the formation of synechiae; however, the leading cause continues to be the performance of uterine curettages of retained products of conception and other intrauterine procedures performed after abortion, miscarriage, or postpartum. Infections such as endometritis and genital tuberculosis are also risk factors for the emergence of synechiae.

The gold standard for diagnosis is hysteroscopy, which allows the evaluation of the location, extent, and density of fibrotic adhesions. Treatment is reserved for those patients with infertility and/or with symptoms such as painful menstruation. The recommended approach is surgical hysteroscopy.

Even after surgical treatment, there may be a recurrence of intrauterine adhesions. Recently, ways to prevent the appearance of synechiae have been studied, such as the use of intrauterine devices, hormone therapy, and use of barrier gel. In this context, the application of a mechanical barrier such as Oxiplex/IU Gel inside the uterine cavity is an option to be considered for prevention of the formation of intrauterine adhesions. Use in humans has been shown to be safe.

In 2011, Spiezo Sardo et al.\*, in a study with 110 patients divided into 2 groups (group 1 underwent hysteroscopic surgery and use of the Oxiplex/IU Gel and control group only underwent surgery), it was observed that in the first group, there were fewer moderate and severe synechiae when compared to the control group.

\*Spiezo Sardo A, et al. The Efficacy of a polyethylene oxide-sodium carboxymethylcellulose gel in prevention of intrauterine adhesions after hysteroscopic surgery, J Minim Invasive Gynecol, Jul-Aug 18(4):462-9, 2011.