

## Extrauterine Hormonal IUD, Spontaneously Translocated through Cesarean Scar Defect. About a Case

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### Abstract

This is an interesting case of a patient, who used an intrauterine endoceptive for years, who spontaneously displaced with extra-uterine perforation and exteriorization through a scar defect from her previous cesarean section.

**Keywords:** *Intrauterine Device (IUD); Extrauterine Perforation; Scar Defect; Cesarean Section; Translocation Mechanisms*

### Introduction

A translocated intrauterine device (IUD) refers to the abnormal displacement of its stem outside the axis of the uterine cavity, either within it or outside it or extrauterine.

The translocation mechanisms of these devices do not depend so much on their components, but rather on various factors inherent to the patient herself and to the operator who inserted it [1]. The pathophysiology of the displacement may be due to the fact that the ends of the edges of the IUD remain inadequately displaced, whether due to their disproportionate size or not, with the fundal cavity, which can exert intrauterine mechanical pressure, inflammation and uterine contractility, especially during menstruation. which is known to also release prostaglandins that favor uterine dynamics. On the other hand, heavy menstruation can also favor the slipping of the IUD, especially if it is smaller in relation to the uterine cavity and its edges are slightly inclined.

On the other hand, the experience of the operator when placing the IUD is of marked importance, in which he must take into account the uterine size, especially its cavity, the cervical uterine angulation, the actual length of the hysteroscopy and the presence of uterine pathology. such as leiomyomatosis, adenomyosis, uterine scars, especially from previous caesarean sections and myomectomy, pelvic inflammatory disease, cervicovaginal infections and intrauterine synechiae [2].

The insertion of uterine endoceptives is relatively very easy, but in the case of the majority, they use a cylindrical plastic device inside which is the IUD and which is pushed with an internal rod, called plunger. In addition, it has a mark in the form of an external ring and the same plunger in its terminal portion to calculate the exact length in relation to the previously measured hysteroscopy. The idea is to avoid uterine perforation or improper insertion. However, this servomechanism claims to be imperfect and often there is a wide margin of error

of almost one centimeter, for fear of injuring the uterus. In the cases of hormonal endoceptives such as Bayer's with its Mirena® brand, the servomechanism is excellent, comfortable and easy to place, with a very low risk of uterine perforation. Most translocated IUDs are located within the uterine cavity and some can even be externalized through the endocervical canal and those found outside the uterine cavity are mostly the result of partial or total uterine perforation, either due to invasive or unnoticed placement, which can last months to years to be able to detect it, especially if the patient does not attend her annual gynecological check-ups or they were not performed during the same ultrasound check-up [2,3].

Extrauterine translocated IUDs are the result of complete perforation and displacement of the IUD, either because it was directly inserted outside the uterus or because the position of the IUD, initially in the myometrium, favored a foreign body reaction effect, repeatedly causing spasmodic uterine contractions with the possibility of expulsion outside the uterus [4].

Post-insertion follow-up of the IUD by pelvic ultrasound, especially transvaginal, can guide its norminsertion or not, especially if it is standardized to avoid the risk of translocation, especially if its placement has been difficult, in nulliparous patients and in those with uterine pathologies.

There may be cases in which the pelvic ultrasound indicates that the IUD is normally inserted and, as months or years go by, it moves inside or outside the uterus. In the latter case, it is very rare for an IUD to translocate outside the uterus, especially if you already had a normal ultrasound. However, cases of IUD translocations to certain areas of the uterus with previous scars from myomectomy and previous cesarean sections have been described in which, due to uterine spasms, they allow the stem or one or both edges of the IUD to be pushed and cause partial spontaneous perforation or complete. This is seen above all in IUDs, with metallic components, which generate greater local inflammation and infections, especially by actinomycetes. Also, iatrogenic translocations of the IUD may occur, due to manipulation when trying to remove it, with the risk of inadvertent perforation.

In the cases of hormonal endoceptives, the spontaneous description of extrauterine translocation has not been published, however, in this publication we will demonstrate a case of spontaneous migration of a hormonal IUD, brand Mirena, through a niche in the post-cesarean uterine scar, with extrauterine location at the isthmic level and positioned intrafascially, including part of the subvesical space and broad ligament. The standard procedure for its resolution is the laparoscopic approach [5,6], however, given the lack of this technological resource, the minilaparotomy approach, as was the case in our case, could be performed easily and quickly.

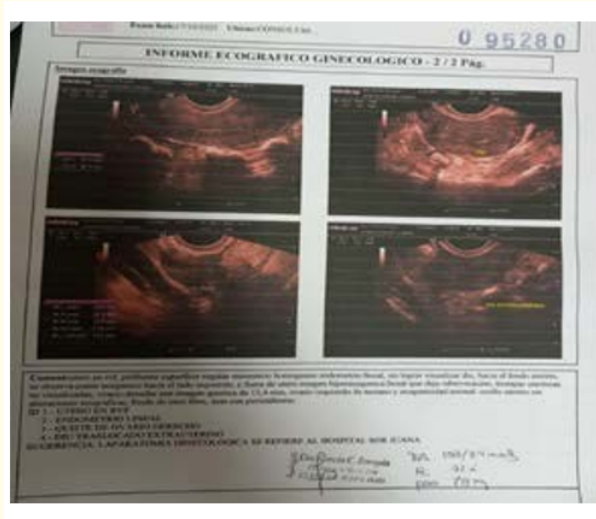
### Description of the Case

This is the patient Y.R.Z, 41 years old, clinical record No.095280, from the city of Mérida, Venezuela, who attended the Family Planning outpatient clinic, presenting pelvic pain of variable intensity, with a 3-month evolution since on 10.20.22, located in the hypogastrium and radiating to the hips, accompanied by occasional micturition urgency, dyspareunia and intermittent spotting, which improves with the use of non-steroidal anti-inflammatory analgesics, such as ibuprofen and diclofenac.

She has an important personal and gynecologic-obstetric history: irregular and abundant menstruation, due to intrapelvic adenoleiomyomatous, treated with oral contraceptives. She was pregnant 1, caesarean section 1, live births 1, being the cause of the abdominal caesarean section in 2015, due to pelvic narrowing, with Pfannenstiel approach and Kerr-type segmental incision, with a healthy live newborn weighing 3400g. She refers to the placement of a hormonal endoceptive on 2.18.2016, without complications, indicated to treat underlying pathology and as a contraceptive. She does not refer to other pathologies or allergies. Last cytological control on 4.19.2022, negative for cervical intraepithelial lesion by Bethesda.

Among the imaging studies, the transvaginal pelvic ultrasound of 10.30.2022, described the uterus without apparent lesions, not visualizing the IUD stem (Image 1). A simple anteroposterior X-ray of the abdomen and pelvis dated 11.1.2022 was requested, with evidence

of an IUD translocated in the pelvis and deviated to the right of it. A hysteroscopy was scheduled on 11.15.2022, in which the absence of an IUD was described, endometrial mucosa without apparent alterations, with the presence of an isthmic niche in the area of previous hysterotomy, with a deep defect of about 3 x 4 mm in depth and width, with a faint reddish appearance. The Magnetic Resonance of 10.1.2023, indicates the presence of IUD, translocated extrauterine, attached to the anterior face of the uterine body.



**Image 1:** Ultrasound report, without evidence of IUD in the uterine cavity and location not specified.

A mini suprapubic laparotomy, Pfannenstiel type, was scheduled on 2.22.2023, under spinal anesthesia, finding IUD, extrauterine, intrafascial and subvesical in the isthmic area, with stem and edges lateralized towards the right broad ligament, dissecting the perimetrium with bladder divulsion and opening of part of the broad ligament, managing to extract the IUD without complications (Video 1-4), (Images 2-4). The patient was hospitalized for 24 hours with discharge without complications, according to the DINDO classification. Finally, her postoperative check-ups at one week, one month, and 3 months have been without abnormalities, with no pelvic pain compared to preoperative pain, no evidence of dyspareunia, and the sensation of functional micturition urgency, with its disappearance.

### Discussion

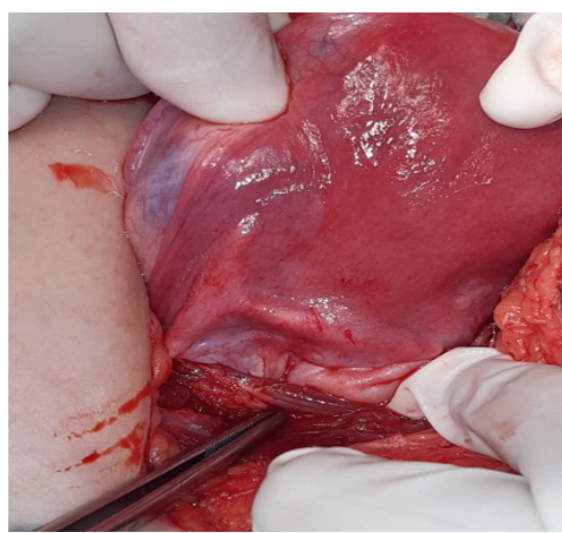
Although much has been published in the medical literature on displaced or dislocated IUDs, it continues to be a problem in family planning clinics, whether in the public or private sector, representing a circumstance that the gynecologist must know how to handle according to the protocols of each service or country.

**Video 1:** <https://youtu.be/Noc0z6jFZkg>

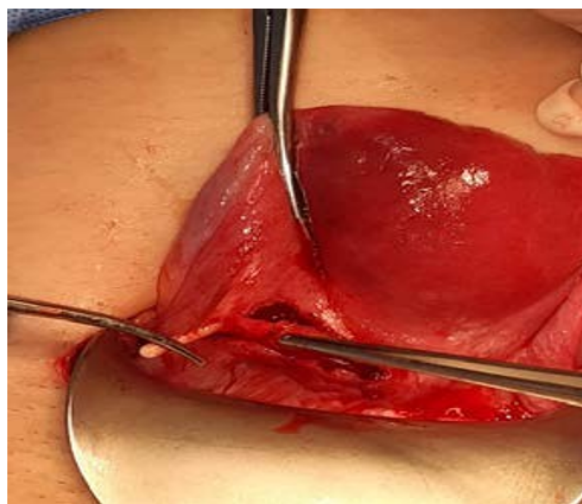
**Video 2:** [https://youtu.be/Hs\\_aUPMRukU](https://youtu.be/Hs_aUPMRukU)

**Video 3:** [https://youtu.be/NW\\_97PZ8JHk](https://youtu.be/NW_97PZ8JHk)

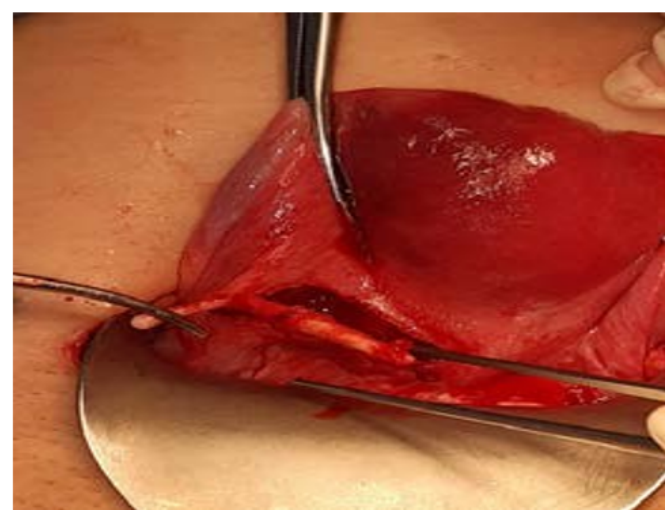
**Video 4:** <https://youtu.be/xBSv82TQCps>



**Image 2:** *The IUD is visualized in the isthmus, below the perimetrium, intrafascial and subvesical.*



**Image 3:** *Perimeter and broad ligament dissection with bladder divulsion. The uterus is lateralized to the left.*



**Image 4:** Extraction of the IUD and closure of the perimetrium and broad ligament.

These devices can be translocated for various reasons, which are well known, and in our particular case, we must be very careful when placing them in patients with previous cesarean sections, who may have healing defects, causing niches through which an IUD originally inserted *in situ*, it can move and change position in such a way that for months or years, due to the effect of uterine contractions, as it contains a foreign body, it can progressively perforate into a deep niche and exteriorize in the pelvis, which is why we wanted publish this case, because of how extremely rare it happens. Another cause of uterine perforation occurs when manipulating the extraction of the IUD with extraction instruments and that the same procedure causes displacement and change of position of the IUD in the uterus, especially if there is a defect in the uterine scar. In this case there were no attempts to extract it.

A review was carried out on the PubMed website, without finding publications in relation to cases similar to ours, which does not necessarily indicate that ours is unique, but rather infrequent.

Finally, the recommendation is that although inserting an IUD of any material or combination is usually a relatively easy procedure, it should be inserted by well-trained medical personnel, especially gynecologists, under a well-established protocol that includes parity, morbidity, ultrasound post-insertion, follow-up, complications and rejection of the method.

Conservative management of a translocated IUD should only be maintained if the patient remains asymptomatic [7], regardless of how long it has been, since the plastic base material generally does not generate infections and its biodegradation is practically low in relation to the longevity of the patient. This was not the case in our case and we had to resort to surgery.

### Conclusion

The displacement of an IUD with spontaneous intrauterine perforation, without external manipulation and exteriorization of the same, is only possible with a defect in the uterine scar in previous caesareans.

### Informed Consent

The patient authorized the publication of this case, including images and videos, for strictly academic purposes.

### Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this work.

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