

## Unusual Intra-caecal Migration of an Intrauterine Device: The Place of Laparoscopy in the Diagnosis and Treatment

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### ABSTRACT

The intrauterine device (IUD) is an effective and widespread contraceptive method. Its transuterine migration into the pelvic organs or the digestive tract is a rare and sometimes serious accident.

We report the case of a 35-year-old patient who presented with transuterine migration of an intrauterine device placed 2 years earlier. Imaging confirmed migration and suspected the digestive tract localization of the IUD. With laparoscopic approach the intra-caecal localization was precise and the treatment made with good postoperative course.

Through this observation we emphasize the diagnostic and therapeutic role of laparoscopic approach in the management of this contraceptive accident.

### Keywords

Intrauterine device, Cecum, Laparoscopy.

### Introduction

Contraception has become a global concern over the past 5 decades due to the rapid increase in the human population [1]. The intrauterine device (IUD) is one of the most common reversible methods of contraception because of its simplicity, effectiveness and low morbidity with a Pearl index of less than 1 per 100 years woman [2,3].

Its genital insertion is a common medical procedure in gynecological practice but may be associated with the risk of genital infection, bleeding, expulsion, uterine perforation and migration [2,4,5]. IUD migration through the uterine wall is a rare and sometimes serious complication [4,5]. This migration occurs mostly into the abdominal cavity, rarely into the bladder, the colon, the appendix, the rectosigmoid or the small bowel [6,7,8]. Modern medical imaging and new minimally invasive techniques play an important role in the management of ectopic IUD [9,10].

We report a case of unusual intra-caecal migration of an IUD and emphasize the important place of laparoscopy in the diagnostic and treatment of this contraceptive accident.

### Case Report

A 35-year-old patient, primigeste primiparous, presented with intermittent pelvic pain that has been progressing for 2 months.

In the past medical history we noted that she had an IUD insertion 2 years ago. This insertion was performed 45 days after she delivered by natural way. The gynecological examination noted the lack of visualization of the IUD strings in the vagina. Plain abdominal X-ray (Figure 1) coupled with abdominal computed tomography scan confirmed IUD migration and suggested rectosigmoid localization (Figure 2).

Laparoscopic exploration showed an adhesion between left salpinx and a mobile cecum with one part of the IUD in contact with the left tube and the other intra-caecal (Figure 3). A ceco-salpingian

adhesiolysis was performed followed by the extraction of the IUD (Figure 4). The cecal defect was then closed by interrupted 3/0 absorbable suture.

The postoperative course was uneventful. She was discharged on post-operative day 5 and on 4 month follow up she was well.



Figure 1: Plain X-ray showing the IUD in the pelvis.

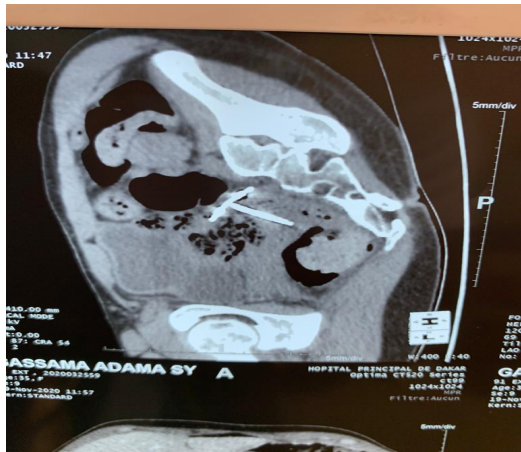


Figure 2: CT suspecting a recto-sigmoid localization

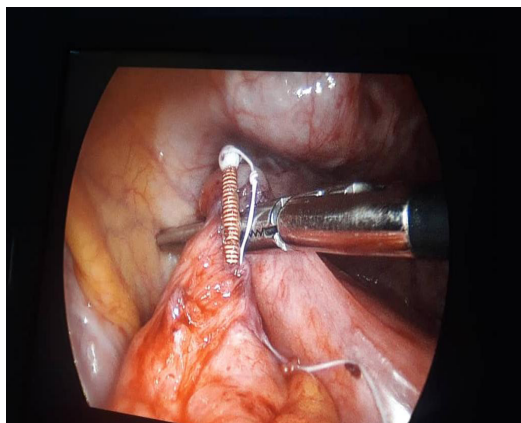


Figure 3: Laparoscopic view of the IUD in the cecum

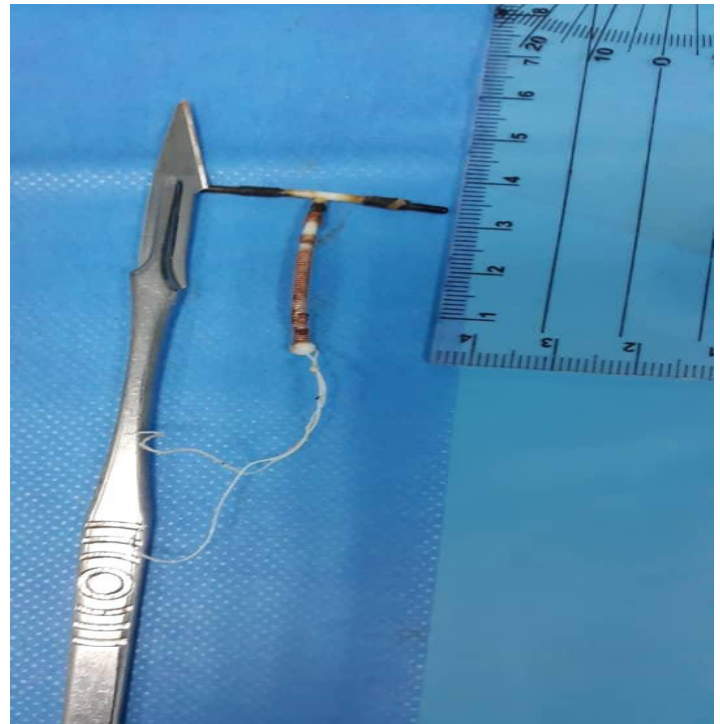


Figure 4: The IUD after extraction

## Discussion

Since its first use in 1909 by Richter, the IUD has become the most widely used method of contraception in the world [10,12,13]. With more than 100 million users, this contraceptive method uses a mechanical process of local action [7]. The insertion of the IUD is a simple but not trivial medical procedure. It requires a perfect knowledge of the technique in order to reduce the risks that may arise from its insertion [5,7]. Among these risks, transuterine migration is a complication with an estimated incidence of between 1.3 and 1.8 per 1000 insertions [9]. Uterine perforation may be partial, when only part of the IUD perforates the wall of the uterus or complete, when the IUD passes through the entire uterine wall into the abdominal cavity [3,10]. In the majority of cases, this complication occurs immediately after insertion of the IUD due to a technical default [4,10]. However, it may be secondary to a progressive erosion of the uterine wall related to the accumulation of enzymes and lysosomal lytic substances due to an inflammatory reaction. This migration begins with the incarceration of a branch of the IUD in the myometrium and continues under the action of uterine contractions after endometrial destruction due to inflammation [4,10].

Factors that promote uterine perforation are multiparity, scarring uterus, chronic inflammation of the uterus, uterine malrotation, operator clumsiness, post-abortion or postpartum placement [2,7]. Hypoestrogenism induced by breastfeeding leads to significant uterine involution, that is why inserting an IUD during breastfeeding increases the risk of uterine perforation [2]. Sarr et al report a risk of uterine perforation multiplied by 10 if the IUD is inserted during the breastfeeding period and a risk multiplied by

5 if it is done in the first 5 weeks of postpartum [2]. In our patient, the insertion of the IUD was done during this period at high risk of uterine perforation.

The IUD migrates mainly into the abdominal cavity, rarely inside a viscera (ovary, fallopian tube, rectum, sigmoid, appendix, bladder) and exceptionally into a vessel [4].

The time between IUD insertion and the appearance of the first clinical signs, varies from a few months to several years [2]. In our patient, IUD migration was diagnosed 2 years after insertion. A delay of 20 years was reported by Bouzouba et al [7]. Clinically, the symptoms are not specific and depend on the location of the IUD [7,9]. However, in 85% migration is asymptomatic and it is the disappearance of the strings at the gynecological examination that raises suspicion of IUD migration [4,7].

The plain X-ray highlights the metallic tone of the copper IUD but cannot judge its intrauterine or extrauterine position [5,6]. Abdominal and endovaginal pelvic ultrasound is the first-line examination in case of doubt. It can reveal uterine vacuity, highlight a partial uterine wall perforation by one of the IUD branches or also specify the ectopic position of the IUD [4]. However, CT and magnetic resonance imaging (MRI) are more effective especially in digestive or epiploic migration of the IUD [6]. In some cases, ultrasound coupled with hystero-graphy is necessary to localize the migrated IUD [4]. Modern tools such as laparoscopy, hysteroscopy, cystoscopy are diagnostic and therapeutic tools [10,11].

Once the diagnosis of migration is made, its recommended to remove the IUD to prevent complications [4]. In intra abdominal or digestive tract localization, laparoscopy is now the method of choice allowing a considerable reduction of post-operative morbidity and length of hospital stay [10,13]. Open surgery is indicated if laparoscopy fails [10,13].

## Conclusion

Transuterine migration of an IUD into the digestive tract is a rare but serious condition. Modern medical imaging plays an important role in topographic diagnosis. But laparoscopy is a revolution in the management of this contraceptive complication with its diagnostic and therapeutic role.

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