



Case Report

Journal Homepage: <http://crp.tums.ac.ir>

Intrauterine Contraceptive Device Complication: Migration to the Small Bowel and Ovary Concurrently



Mohammad Reza Sasaki^{1*}, Amir Hossein Soltani²

1. Assistant Professor, Department of Radiology, Medical Imaging Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Radiology Resident, Department of Radiology, Shiraz University of Medical Sciences, Shiraz, Iran.



Citation: Sasaki MR, Soltani AH. Intrauterine Contraceptive Device Complication: Migration to the Small Bowel and Ovary Concurrently. *Case Reports in Clinical Practice*. 2020; 5(1):27-29.

Running Title: IUD Migration



Article info:

Received: 29 January 2020

Revised: 19 February 2020

Accepted: 18 March 2020

Keywords:

Intrauterine devices; Uterine perforation; IUD migration; Diagnostic imaging; Ultrasonography

ABSTRACT

Intrauterine Contraceptive Device (IUD) is a useful and reversible contraceptive method. This method has potential complications. Uterine perforation and IUD migration is rare but is a serious complication. Migrated IUD could situate in different organs such as bowel loop, urinary bladder, fallopian tube, or ovary. However, the presence of a displaced IUD simultaneously in the two organs is a rare event. Ultrasonography is an appropriate and initial method for evaluating the IUD location. Abdominopelvic x-ray, computed tomography, and MRI are adjunctive imaging modalities. We present a case with migrated IUD, which was located in the right ovary and small intestine simultaneously.

Introduction

Intrauterine Contraceptive Device (IUD) is a useful and reversible contraceptive method used by women worldwide for many years. However, this method has potential complications such as dysmenorrhea, pelvic infection, expulsion,

perforation, and migration [1]. Uterine perforation and IUD migration is rare but a serious IUD side effect [1-3]. Also, the presence of a displaced IUD simultaneously in the two organs is a rare complication. Among the imaging modalities, ultrasonography is the preferred initial method for evaluating the location of the IUD. This modality is easily available and does not have ionizing

* Corresponding Author:

Mohammad Reza Sasaki, MD.

Address: Department of Radiology, Medical Imaging Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.

E-mail: sasanimrz@gmail.com

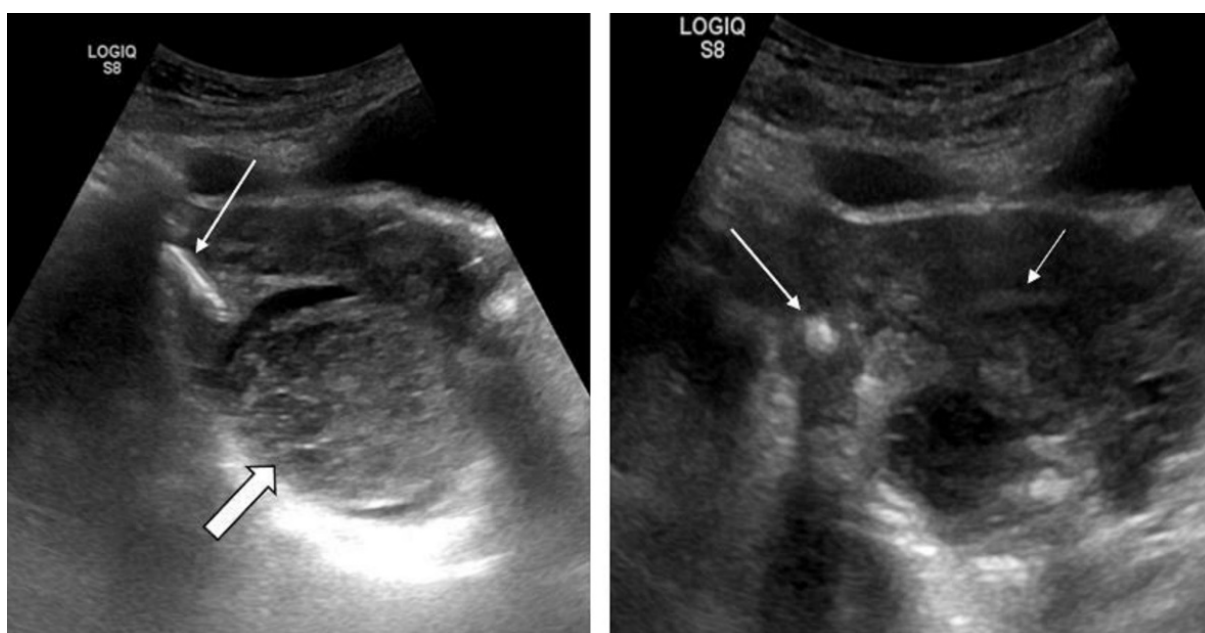


Figure 1. Transabdominal ultrasound showing empty uterine cavity (short arrow) associated with migrated IUD adjacent to the uterus (long arrows), also a complex cystic lesion near the dislocated IUD (thick arrow)

radiation. We present a case with migrated IUD, which was located in the right ovary and small intestine concurrently. Ultrasonography revealed IUD just outside the uterine cavity but was unable to identify its precise location.

Case Reports

A 39-year-old woman (G4L3A1) with one abortion and then three cesarean sections presented to our hospital. She was complaining of pain in the right lower quadrant radiating to right flank without vaginal bleeding or fever since two months ago. Her clinical symptoms began just after the insertion of an IUD. In her past medical history, the patient had utero-vesical adhesion after the second cesarean section and temporary hypothyroidism during her last pregnancy two years ago. Abdominopelvic ultrasound was performed, and the findings revealed an empty uterus (no IUD within it). But, IUD was seen near the uterus at the right side of the pelvis suggesting IUD migration (Figure 1).

Evaluation of the right ovary was not possible. Additionally, on the right side of the pelvic cavity near the dislocated IUD, there was a complex cystic lesion measuring about 55 x 52 mm (Figure 1). The complicated adnexal cyst was suggested, and the possibility of abscess formation owing to displaced IUD was less likely because of the absence of fever. In operation, arms of the

IUD were detected in the right ovary, and its stem was located in small bowel wall and lumen. It was extracted, and the site of small bowel perforation and uterine perforation in fundus were repaired. The mentioned cystic lesion was removed. It was a right ovarian complex cyst. The adhesion between small bowel loop and uterus was released, too.

Discussion

Uterine perforation and migration is a rare complication of the IUD. Migrated IUD could situate in different places such as bowel loop, urinary bladder, fallopian tube [1, 3], or rarely in the ovary [4, 5]. However, the existence of dislocated IUD in the two organs at the same time is a rare incident. This complication may present with abdominal pain, abnormal vaginal bleeding, or nothing at all [6, 7]. Abdominal pain, fever, and intermittent diarrhea in a patient with dislocated IUD should raise concern for bowel injury [8]. Besides, dislocated IUD may result in pelvic infection and abscess [1].

Imaging has a crucial role in the assessment of IUD location and its complications. Ultrasonography is commonly used as a first step imaging to evaluate IUD [9, 10]. However, it has some limitations. Ultrasound imaging is more useful to assess intrauterine IUDs, but it may not show migrated ones [11, 12]. This modality has limitations to detect some complications of migrated

IUDs such as bowel perforation. When IUD is not identified by ultrasonography, abdominopelvic x-ray could be the next step [10, 12]. CT scan or MRI may be helpful in situations that mentioned modalities fail to detect migrated IUD or its complications despite the high clinical suspicion for perforation [10, 12].

We present a case with migrated IUD, which was located in the right ovary and small bowel loop simultaneously. In our case, the migrated IUD was not far from uterus; therefore, it was detected by ultrasound without difficulty. Despite locating IUD in small bowel loop and ovary, ultrasound was not able to reveal these findings.

In summary, the presence of a displaced IUD simultaneously in two organs is rare, but it is not impossible. Ultrasonography is the appropriate initial method for evaluating the IUD location. However, it has limitations, such as missing some complications. In this situation, other imaging modalities, including abdominopelvic x-ray, computed tomography, and MRI, could help us to detect IUD location and its possible complications.

Ethical Considerations

Compliance with ethical guidelines

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of interest

The authors declared no conflict of interest.

References:

- [1] Onalan G, Mulayim B, Toprak T, Baser E, Zeyneloglu HB. Extrauterine displaced intrauterine devices: When should they be surgically removed? *Taiwanese Journal of Obstetrics and Gynecology*. 2009; 48(4):415-6. [DOI:10.1016/S1028-4559(09)60334-X]
- [2] Foda AA. A rare site of intrauterine contraceptive device migration. *European Journal of Obstetrics, Gynecology, and Reproductive Biology*. 2016; 198:172-3. [DOI:10.1016/j.ejogrb.2015.12.006] [PMID]
- [3] Goldbach AR, Hava S, Patel H, Khan M. IUD embedment in the fallopian tube: An unexpected location for a translocated IUD. *Radiology Case Reports*. 2018; 13(4):788-92. [DOI:10.1016/j.radcr.2018.04.030] [PMID] [PMCID]
- [4] Özdemir H, Mahmutyazicioğlu K, Tanrıverdi HA, Gündoğdu S, Savranlar A, Özer T. Migration of an intrauterine contraceptive device to the ovary. *Journal of Clinical Ultrasound*. 2004; 32(2):91-4. [DOI:10.1002/jcu.10228] [PMID]
- [5] Verma U, Verma N. Ovarian embedding of a transmigrated intrauterine device: A case report and literature review. *Archives of Gynecology and Obstetrics*. 2009; 280(2):275-8. [DOI:10.1007/s00404-008-0882-2] [PMID]
- [6] Ferguson CA, Costescu D, Jamieson MA, Jong L. Transmural migration and perforation of a levonorgestrel intrauterine system: A case report and review of the literature. *Contraception*. 2016; 93(1):81-6. [DOI:10.1016/j.contraception.2015.08.019] [PMID]
- [7] Kaislasuo J, Suhonen S, Gissler M, Lahteenmaki P, Heikinheimo O. Uterine perforation caused by intrauterine devices: Clinical course and treatment. *Human Reproduction (Oxford, England)*. 2013; 28(6):1546-51. [DOI:10.1093/humrep/det074] [PMID]
- [8] Key TC, Kreutner AK. Gastrointestinal complications of modern intrauterine devices. *Obstetrics and Gynecology*. 1980; 55(2):239-44. [PMID]
- [9] Goyal S, Goyal S. Displaced intrauterine device: A retrospective study. *The Journal of Medical Research*. 2016; 2(2):41-3. http://www.medicinearticle.com/JMR_201622_07.pdf
- [10] Nowitzki KM, Hoimes ML, Chen B, Zheng LZ, Kim YH. Ultrasonography of intrauterine devices. *Ultrasonography*. 2015; 34(3):183-94. [DOI:10.14366/usg.15010] [PMID] [PMCID]
- [11] Rowlands S, Oloto E, Horwell DH. Intrauterine devices and risk of uterine perforation: current perspectives. *Open Access Journal of Contraception*. 2016; 7:19-32. [DOI:10.2147/OAJC.S85546] [PMID] [PMCID]
- [12] Kho KA, Chamsy DJ. Perforated intraperitoneal intrauterine contraceptive devices: Diagnosis, management, and clinical outcomes. *Journal of Minimally Invasive Gynecology*. 2014; 21(4):596-601. [DOI:10.1016/j.jmig.2013.12.123] [PMID] [PMCID]