

Acute Appendicitis Plus in Uterus Foreign Body: Clinical Case

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ABSTRACT

Introduction. Uterine perforation by an intrauterine device (IUD) is classified into primary and secondary, the first case occurs within the first month of its insertion and the second after this period. This migration may be due to spontaneous uterine contractions, bladder contractions, increased intestinal peristalsis, and movement of peritoneal fluid. **Clinical case.** A 28-year-old patient came to the emergency department with abdominal pain that had lasted 8 hours until admission, accompanied by anorexia and nausea. Physical examination, a painful abdomen in the right iliac fossa with a positive Mc Burney sign. Vital signs with a low-grade fever of 37°C, BP 80/50, rest normal. Laboratories: leukocytosis 14.1/103 uL, neutrophilia 89%, rest normal, pregnancy test negative. The patient admitted to the operating room, and an open appendectomy was performed, finding a perforated appendix at the appendicular base with a retroileocecal abscess, classifying it as grade IV appendicitis. It was incident; the finding of an IUD emerging from the uterus a segment of the copper T that involves the right Fallopian tube and the rest into the utero is reported. **Discussion.** Reversible and long-acting contraceptives are safe and effective in their application, they involve the risk of immediate, mediate, and late uterine perforation, so their incidence is 1-2 cases per 1000 insertions; in the first setting it may be due to inexperience of the doctor who applies it by applying excessive force at the time of application, and it will surely give alarm symptoms immediately depending on the site of the perforation. **Conclusions.** How can be seen in this report, appendicular surgeries led to the location of this translocate IUD that had perforated the uterus and was halfway to

being completely expelled. This finding is rare, and two pathologies were successfully resolved in the same surgical time.

Keywords: Intrauterine device, migration, appendicitis.

INTRODUCTION

Uterine perforation by intrauterine device (IUD) is classified into primary and secondary, the first occurs within the first month of its insertion and the second after this period. This migration may be due to spontaneous uterine contractions, bladder contractions, increased intestinal peristalsis, and movement of peritoneal fluid [1].

The most frequent sites of migration are the omentum, the fornix of Douglas, colon associated with perforation [2], myometrium, broad ligament, free in the abdominal cavity, serosa of the small intestine, serosa of the colon, and mesentery. Other reported sites have been: bladder [3], left inguinal region [4], anterior abdominal wall with abscess formation [5], although very little has been reported on appendicitis caused by the IUD and much less on the association of patients operated on for acute appendicitis with findings of transmigration and perforation of the uterus simultaneously [6].

CLINICAL CASE

A 28-year-old female who attended the emergency department presenting with abdominal pain lasting 8 hours until admission, accompanied by anorexia and nausea. On physical examination, the abdomen was painful in the right iliac fossa with a positive McBurney sign, Alvarado score of 9 points, positive psoas, and talopercussion, Rovsing and obturator maneuvers. Vital signs with a fever of 37°C, BP 80/50, the rest normal. The ultrasonogram revealed a thickened cecal appendix measuring 18 mm in its longitudinal axis, hypoechoic with increased echogenicity in the adjacent fat and free fluid. Laboratories: leukocytosis 14.1/103 uL, neutrophilia 89%, rest normal, pregnancy test negative. QS: glucose 81 mg/dL, urea 19.3 mg/dL, urea nitrogen 9 mg/dL, creatinine 64 mg/dL. General urine test: ketones 10 mg/dL, abundant epithelial cells, leukocytes 7 to 9 per field, and moderate bacterias. Diagnosis of acute appendicitis is established. She was admitted to the operating room and an open appendectomy was performed, finding free fluid in the pelvic cavity and a perforated appendix at the appendicular base, edematous, fibrous with a retroileocecal abscess, classifying it as grade IV appendicitis. As an incident, the finding of a translocated IUD emerging from the uterus, a segment of the copper T that involves the right fallopian tube and the rest still in utero, is reported. Support was requested from the Gynecology Service, which removed the IUD without incident or accident. (Figures 1-3).

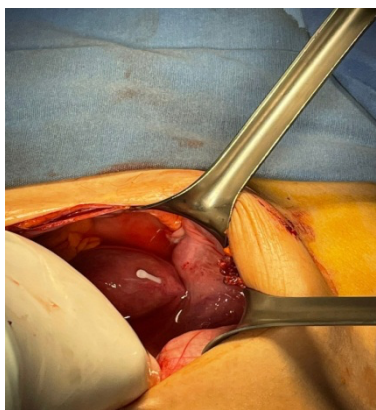


Figure 1. Foreign body in the uterus.

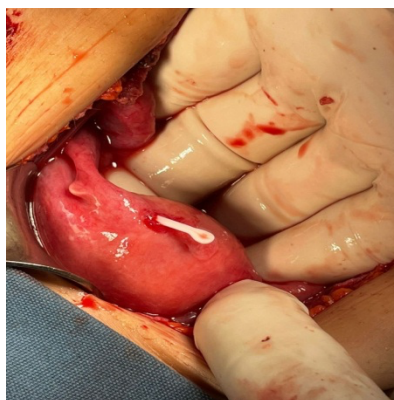


Figure 2. Foreign body emerging from the uterus.



Figure 3. IUD translocated with emergency into the abdominal cavity.

DISCUSSION

Reversible and long-acting contraceptives are safe and effective in their indication and application, but their application implies a risk of immediate, mediate and late uterine perforation in such a way that its incidence is approximately 1-2 cases per 1000 insertions, in the first. In this case, it may be due to the inexperience of the doctor who applied it when applying excessive force at the time of applying it and it will surely give alarm symptoms immediately depending on the perforation site [7, 8].

In cases of late perforation, the symptoms are non-specific or nonexistent since they can present with discomfort in the lower abdomen, transvaginal discharges that are ordinarily

treated with analgesics and antibiotics with partial response to treatment, even so, cases of asymptomatic perforation by IUD have been reported. Our patient did not present any symptoms and it was only a fortuitous finding when treating another condition without any relation [9].

Weerasekera, et al [10] report a case of colo-colic sigmoid fistula due to IUD migration in a pregnant woman who had had an IUD inserted five years previously, asymptomatic with loss of control of the pregnancy up to 38 weeks of gestation with transvaginal resolution of the pregnancy and Since she reported having an IUD, it was located in the pelvic cavity by abdominal radiography and subjected to laparotomy for its removal, finding a palpable IUD within a mass, deferring surgery and preparing it for another intervention adequately with removal and repair of the fistula from the fallopian tube to the sigmoid without complications, our case did not perforate any intra-abdominal organ because it had not yet fully migrated, although it could well not perforate and only adhere to the omentum.

Bernuy S, et al [11] report a case of IUD migration eight years after its insertion and who, prior to admission, presented sudden, discontinuous, moderate to intense pelvic pain accompanied by nausea and headache with urinary symptoms. She has admitted with diagnoses of probable pelvic inflammatory disease vs. IUD migrated in such a way that when the guide wires of the IUD are not observable or palpable in the gynecological examination, suspicion of translocation and probable migration of the same is pertinent. During the laparotomy, intestinal compromise of the rectosigmoid was found with successful repair. Our patient's IUD never presented symptoms corresponding to migration, although when it was found it had not yet completely crossed the uterine wall.

Liu G, et al [12] report a case of IUD placement nine years-ago that presented data of recurrent urinary tract infections, apart from these symptoms she did not present any other discomfort, the study using color Doppler ultrasound located a hyperechoic intravesical image only but the tomography revealed the IUD on the upper face of the bladder that penetrated into it; cystoscopy demonstrated the IUD itself, which was removed by cystotomy without complications. In our case, only the device was removed and the underlying disease was resolved, which was acute appendicitis.

Morland D, et al [13] report that Single-photon emission computed tomography with computed tomography is very useful for detecting these foreign bodies as in the case of a 52-year-old patient who had had an IUD inserted 12 years earlier and was incidentally misplaced. Once this finding was found, due to the diagnosis of acute appendicitis detected in a timely manner, no additional studies were required for its diagnosis and treatment.

CONCLUSIONS

As can be seen in this report, the appendiceal surgery localized this translocated IUD that perforated the uterus and was halfway to being fully expelled. This finding is very rare and two pathologies were successfully resolved in the same surgical time.

References

1. Mejía, López J, Sepúlveda N, Zavaleta T, Mazzaro M. Dispositivos intrauterinos penetrados y migrados: hallazgos en tomografía computarizada. *Rev Colomb Radiol*, 2011; 22(3):3263-71.

2. Kaleem A, Zaman B, Hassan A, Nasir M. Transmigration an intrauterine device in to sigmoid colon. Surgical management. A case report. J Pakistan Med Assoc, 2018; 68(11):1716-18.
3. Abonia CH, Gómez MC, Mosquera JE, Torregroza MA, García D, Usubillaga F. Translocación de dispositivo intrauterino de cobre a vejiga y litiasis vesical secundaria. Reporte de caso clínico. Urol Colomb. 2020; 29:58-62.
4. Aghaways I, Angwer S, Ghareeb RH, Sabir F, Hussein F. Migration of an intrauterine device to the left inguinal region. The first reported case. Int J Surg Case Rep. 2016; 28:68-70.
5. Hassan S, Ahmad A. Migrated intrauterine device presented as anterior abdominal wall abscess. J Surg Case Rep, 2019; 6:174.
6. Poveda-Ortiz OM, Pedraza M, Cabrera LF, Báez DK. Apendicitis aguda por migración de dispositivo intrauterino con obstrucción del apéndice cecal. Reporte de casos y revisión de la literatura. Ann Mediterr Surg. 2020; 3(2):3-7 doi 10.22307/2603.8706.2020.02.002.
7. Pérez-Alcázar KV, Pérez-López JC, Martínez-Hernández CM, Ibarra-Rovirosa EA, Aguilar-Chablé FL. Perforación uterina por dispositivo intrauterino (DIU). Tratamiento laparoscópico: reporte de caso clínico. Ginecol Obstet Méx. 2022; 90(7):616-22.
8. Practice Bulletin No. 186: Long-Acting Reversible Contraception: Implants and intrauterine Devices. Obstet Gynecol. 2017; 130:1173-5 doi: 10.1097/AOG02400
9. González MJJ, Cázares RTK, Nájera RIA, De La Cerda AJC. Perforación asintomática por DIU. Acta Med GA. 2022; 20(1): 88-90. <http://dx.doi.org/10.35366/103564>.
10. Weerasekera A, Wijesinghe P, Nugaduwa N. Sigmoid colocolic fistula caused by intrauterine device migration: a case report. J Med Case Rep. 2014; 8:81.
11. Bernuy PS, Rivera NMC, Salazar LC, Ramirez FC. Dispositivo intrauterino parcialmente migrado e incrustado en serosa del rectosigmoides tras 8 años de inserción. Rev Chil Obstet Ginecol 2015; 80(5); 412-15.
12. Liu G, Li F, Huang G. Intrauterine device migrated into the bladder: two case reports and literature review. BMC Women's Health. 2021; 21:301. <http://dx.doi.org/10.1186/s12905-021-01443-w>.
13. Morland D, Mathelin C, Wattiez A, Namer IJ. Bone single photon emission computed tomography with computed tomography disclosing chronic uterine perforation with intrauterine device migration into the anterior wall of bladder: a case report. J Med Case Rep. 2013; 7:154.