Case Report

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Migration of an Intrauterine Device to the Bladder: A Case Report

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Abstract

The Intrauterine Contraceptive Device (IUCD) is one of the most effective and safe contraceptive methods. The intrauterine contraceptive device can perforate the uterine wall and migrate to pelvic or abdominal organs. The clinical presentation may vary from asymptomatic patients, urinary symptoms, to acute abdominal pain with hollow viscera perforation. When migration of the intrauterine contraception device is present, removal is mandatory due to its potential complications.

The Intrauterine Device (IUD) is one of the safest and most effective contraceptive methods. The intrauterine device can pierce the uterine wall and migrate into the pelvic or abdominal organs. Its clinical presentation is variable, from asymptomatic cases, nonspecific urinary symptoms, to an acute abdomen with perforation of the hollow viscus. IUDs that have migrated out of the uterine cavity should always be removed due to possible complications.

This is a 27-year-old patient, 3 gestations, 2 cesarean sections, 1 abortion, with urinary symptoms of 5 months of evolution, without improvement with empirical antibiotic therapy. At gynecological examination, the threads of the device were not observed through the cervix. Transvaginal ultrasound was performed, finding IUD inside the bladder. Cystoscopy revealed the device embedded in the lateral wall of the bladder, with an unsuccessful attempt to remove it by this route. Open cystectomy was performed with successful removal of the device.

Keywords: Intrauterine Device; Intravesical Migration

Introduction

Long-term contraceptives such as the Intrauterine Device (IUD) are among the safest and most effective contraceptive methods for preventing pregnancy. [1] Its popularity has been increasing and it is estimated that it is used by approximately 14.3% of women of childbearing age to worldwide. [2] Despite the fact that uterine perforation is rare, it represents one of the major complications at the time of its placement and has been associated with migration of the device to pelvic and abdominal organs. [3] The rate of uterine perforation at the time of its placement insertion is 1.9-3.6 per 1000 placements.4 Most perforations occur with the procedure at the time of insertion, although some reports suggest that about half of cases are identified within a year of placement. [5]

The clinical presentation after perforation and migration is highly variable.

Many patients are asymptomatic, some with symptoms, abdominal and/or pelvic pain, others present with pregnancy as a failure of the contraceptive method. [6] A small number of patients present with an acute abdomen, intestinal obstruction or perforation of the hollow viscus. [7]

Cases have been reported in the literature of perforation of abdominal organs that include the bladder, sigmoid colon, appendix and small intestine. [8] When there is migration of the intrauterine device, it is mandatory to remove it due to its possible complications.

Depending on its location, the first accepted step for device removal should be a laparoscopic approach. [6] A laparotomy may be necessary if the device is embedded in the viscera or surrounded by adhesions. [8]

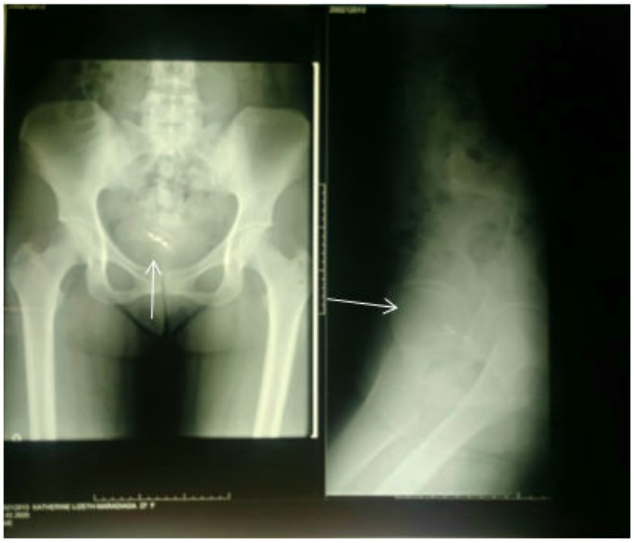
Presentation of the case

This is a 27-year-old female patient, with 3 previous pregnancies, 2 cesarean sections and curettage due to a molar pregnancy, who was referred to the urology service with a history of dysuria, polyakiuria, dyspareunia, and suprapubic pain of 5 months. Evolution, denying leucorrhoea or transvaginal bleeding.

The patient had received empirical antibiotic treatment for urinary infection without improving.

Patient with a history of having placed a copper T intrauterine device 18 months ago, without subsequent evaluations of the same (Figure 1).

Figure 1: X-ray showing presence of the IUD.



On physical examination, no data of peritoneal irritation were found. The gynecological examination did not show the threads of the intrauterine device exiting the cervix. The hologram did not show leukocytosis and the urine test was not pathological. A transvaginal ultrasound was performed by the radiology service, which reported the absence of the device within the uterus, visualizing an echogenic structure within the bladder.

A cystoscopy was performed, finding the copper T intrauterine device embedded in the left lateral wall of the bladder, with a certain degree of calcification. An attempt was made to remove the device during the procedure without success because it was embedded. The patient underwent an open suprapubic cystectomy, finding the device embedded in the wall, it was removed without complications, performing primary closure of the cystectomy (Figure 2).

Figure 2: Intraoperative photograph of the location of the device within the bladder.

The patient was discharged on the third day. Urinary symptoms and abdominal pain resolved completely at follow-up 4 weeks later.

Discussion

The intrauterine device is the most widely used reversible contraceptive method in the world due to its safety, cost and effectiveness. [9] A major complication, although rare, is uterine perforation with migration of the device to pelvic or abdominal organs.3,5 The mechanism exact migration is unclear.3 There is a consensus that the common mechanism is that the device is forced into and through the uterine wall upon insertion. [10] Secondary erosion and perforation can occur at any time after insertion, resulting in slow migration through the muscular wall of the uterus and bladder. [11]

Factors influencing uterine perforation include: low experience of the placing provider, postpartum placement (<6 months from delivery), low parity.10 Previous uterine curettage and previous cesarean sections have not been associated with increased risk of perforation. [12,13] It is believed that most perforations occur at the time of insertion, but can occur spontaneously at any time. [3] Uterine perforation can be partial or complete, depending on whether the device completely penetrated the uterine wall. [10]

The clinical presentation is variable, some patients are asymptomatic, others present with persistent abdominal pain, and post-insertion transvaginal bleeding that may suggest perforation at insertion. [14] Delayed presentation may include dysuria, dyspareunia, intermittent diarrhea, intestinal obstruction, low digestive bleeding depending on the migration site. [10,15] Pregnancy in the presence of an intrauterine device, the absence of visualization of the threads through the cervix require evaluation to rule out expulsion of the device or poor positioning.10 Possible migration should be suspected in patients with urinary symptoms or abdominal pain. [11]

Transvaginal ultrasound is the study of choice to identify the presence of the intrauterine device within the bladder. [16] Cystoscopy is another method to visualize the intravesical device and when possible, it is preferred to remove the device due to its low morbidity and effectiveness. [17] Surgical management should also be considered to remove the intrauterine device that has migrated either laparoscopically or with an open approach. [7] Although the laparoscopic approach is preferred due to less morbidity, patients should be selected individually depending on the degree of presentation, the location of the device and the patient's symptoms.6 Laparotomy may be necessary if the device is embedded in the viscera or surrounded by adhesions. [8]

Conclusion

The clinical presentation may vary from asymptomatic patients, urinary symptoms, to acute abdominal pain with hollow viscera perforation. When migration of the intrauterine contraception device is present, removal is mandatory due to its potential complications.

The presence of persistent urinary symptoms in a patient with a misplaced intrauterine device should alert to the possibility of migration of an intrauterine device to the bladder.

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