Intrauterine Contraceptive Device Migration to the Sigmoid Colon: Case Report

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Abstract

The Copper T intrauterine devices (IUDs) are a commonly used method of contraception for women, but have been associated with serious complications such as bleeding, perforation and migration to adjacent organs or omentum. Although perforation of the uterus by an IUD is not uncommon, migration to the sigmoid colon is extremely rare. Here, we report a case of 37-year-old female with an IUD migrating through the uterus into the peritoneal cavity and subsequently invading into the sigmoid colon.

Key Words: Intrauterine contraceptive device, migration, sigmoid colon

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Introduction

Intrauterine devices (IUDs) are the most widely used form of reversible contraception worldwide. IUDs provide a safe and highly effective form of long-acting reversible contraception. Although complications such as expulsion and missing strings may occur in up to 18% of users, uterine perforation is a rare, but serious, complication [1]. Case reports of uterine perforation have become increasingly common, likely because of the growing popularity of IUD use. Perforation may be asymptomatic or may cause pain, abnormal bleeding, bowel or bladder perforation, obstruction or fistula formation [2]. Here, we report a case of an IUD migrating through the uterus into the peritoneal cavity and subsequently invading into the sigmoid colon by using laparotomic techniques.

Case

A 37-year-old woman (gravida 2 para 2) who had an IUD (Copper T), inserted 2 month after delivery, presented, 1 years later, with transient pelvic pains. During the vaginal examination, the IUD string was not visible at the external os and transvaginal ultrasonography also visualized the IUD located outside the uterus. An abdominal X-ray confirmed the presence of the IUD in the pelvis. The patient was explained that she needs to undergo surgery to remove the IUD since it can cause complications. Bowel was prepared by proper laxative day prior to surgery in anticipation of any bowel procedure. A diagnostic laparoscopy was performed, which showed bowel laceration owing to the migration of the IUD (Figure 1). One limb of IUD was seen to invade wall of sigmoid colon, however, because of bowel laceration, laparotomy was performed to open repair. Adhesions were lysed carefully by sharp scissor dissection. Then linear incision was made on serosal wall of sigmoid colon at place where IUD was invaded in it. IUD was removed carefully from sigmoid wall after careful sharp scissor dissection (Figure 2). On careful examination only serosa and muscular layers of sigmoid was cut during dissection. Mucosa was not opened. Few seromuscular sutures were taken over sigmoid to close partial rent which occurred during dissection. The patient made a non-eventful postoperative recovery and was discharged after 72 h of observation.

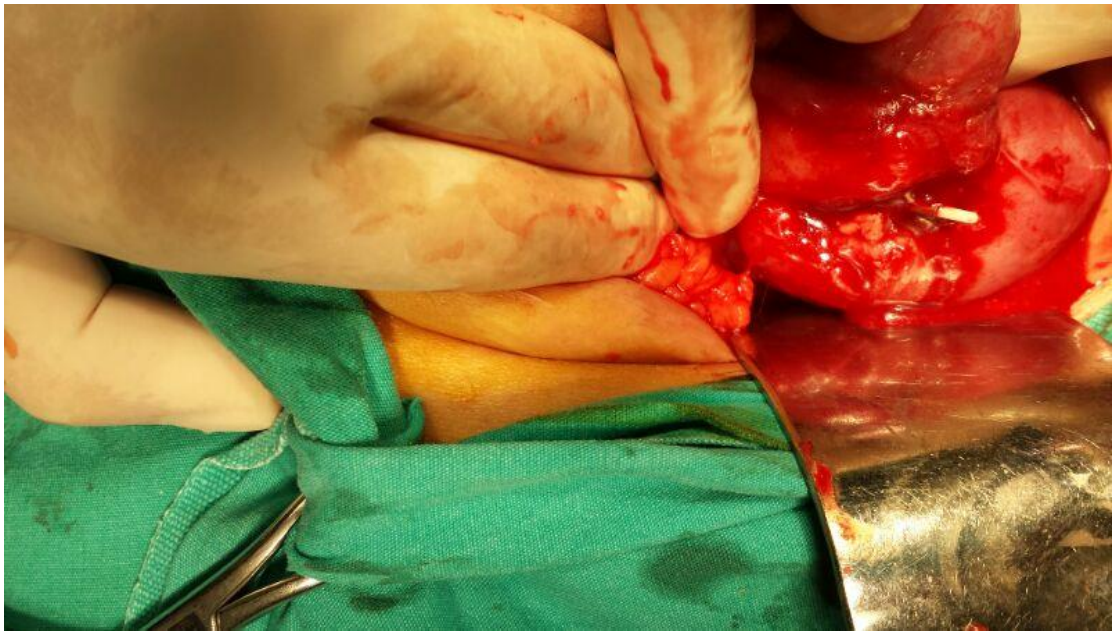

Figure 1: Intraoperative image of the copper IUD densely adherent to the sigmoid colon.

Figure 2: The intrauterine device was removed from the sigmoid colon

Discussion

Uterine perforation is one of the most serious complications associated with IUDs, and although rare. This may result in device migration into adjacent structures including the urinary bladder, bowel, omentum and retroperitoneum. Clinicians should be aware of this complication and its management.1 Factors affecting migration include uterine size, position, timing of the insertion, congenital uterine anomalies and previous surgery. If inserted during the puerperium, uterine involution, strong contractions and soft consistency of the uterus may increase risk of perforation [3].

Misplacement of the IUD usually occurs at time of insertion and is recognized during the first year in 90% of women. However, an intraperitoneal IUD may remain undetected for months or years if the patient remains asymptomatic. The inability to visualize the IUD strings on gynecologic examination may raise suspicion. The removal of an intraabdominal IUD in a symptomatic patient is appropriate to alleviate pain or bleeding. Many women with a perforated IUD are asymptomatic, with over 30% of perforations recognized only when pregnancy [4]. None of the perforated IUDs were diagnosed at the time of insertion, and most were undetected for several years. If attempts at office retrieval fail, transvaginal ultrasonography is the preferred initial method for locating a missing IUD [5].

Studies suggest that up to 15% of perforated IUDs may cause injury to surrounding organs, most frequently the bowel. IUD-related intestinal perforations primarily involved the sigmoid colon, followed by the small intestine and rectum. Early puerperal insertion and subsequent pregnancy appear to be risk factors for bowel injury. The device may be partially or completely embedded in the bowel wall [6].

The World Heath Organizations recommend that any displaced IUD within the abdomen should be removed following IUD associated uterine perforation [7] In the past, concerns about extensive adhesive disease often led to performing laparotomy for IUD retrieval. However, laparoscopy is effective and safe for intraperitoneal IUD removal. Laparoscopy provides a panoramic view of the peritoneal cavity, which is particularly suited to locating and removing a lost device [1].

Most commonly, patients found to have an IUD partially or completely embedded in the colonic wall were managed with a laparotomy. With advances in laparoscopy, these situations are being increasingly managed with minimally invasive techniques [8]. Previous reports of

laparoscopic exploration and removal of translocated IUD from the sigmoid colon have had variable clinical outcomes. Inceboz et al reported the laparoscopic removal of an IUD in the sigmoid colon that resulted in a sigmoid perforation requiring a temporary colostomy [9]. Gungor et al reported removal of partially embedded IUDs in the sigmoid colon without any adverse consequences [10]. Chi et al removed an IUD that had completely perforated into the sigmoid colon by performing a laparoscopic-assisted resection of the involved segment of the sigmoid colon [11]. They recommended that partial penetration of an IUD into the colonic wall may be removed laparoscopically with intracorporeal repair of the colonic defect. It was also suggested by them that a full-thickness perforation by an IUD into the colonic wall should be managed by resection of the involved colon with primary anastomosis.

In conclusion, IUDs are a safe, effective form of longacting reversible contraception; however, perforations can present diagnostic and management challenges. We advocate prompt removal of all intraperitoneal IUDs because most complications occurred in patients with a remote history of IUD placement and with few if any symptoms. Laparoscopic removal of a perforated intraperitoneal IUD is a safe and preferred method.

Conflict of interests

The authors have no conflicts of interest.

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