Case Report: a Case of Migrated Intrauterine Copper Device into the Rectum Successfully Managed as a Multidisciplinary Approach after 2 Years of Insertion

Li K.E., Matsuzono T., Lee M.H.M.
Department of Obstetrics and Gynaecology, Queen Elizabeth Hospital, Hong Kong
Corresponding author email: Menlik.lee@gmail.com

Abstract Objective: We present a case of migrated IUCD into the rectum 2 years after its insertion.

Case: A 34 years old lady suffers from a migrated intrauterine copper device (MLZ380) into the rectum despite being asymptomatic for 2 years. Diagnosis was made by a combination of x rays, ultrasound and laparoscopy. Successful removal was performed by a multidisciplinary effort through diagnostic laparoscopy, colonoscopy and anterior resection of bowel in the same settings.

Conclusion: Our case demonstrated a migrated IUCD can have its large proportion migrated into the rectal cavity while despite rectal perforation, it can remain relatively asymptomatic for over 2 years. Removal of such migration often require detail investigations and multi-disciplinary involvement to ensure safe removal and in a single operative occurrence.

Keywords Contraception; Intrauterine device

Introduction
Intrauterine contraceptive devices (IUCD) are effective, safe and economic methods of contraception. Perforation of the uterus is infrequent and migration of IUCD was reported as 2.3/1 000 insertions (Intrauterine Contraception, 2007). Recognition of perforation and subsequent migration may present after several years of symptom free period. Diagnosis and management often require several modalities and several surgical specialties. We report a case of IUCD partially migrated into the lumen of the rectum 2 years after its insertion and removal was performed in a single operative episode involving both gynaecologists and surgeons.

Case
A 34 years old fit and well lady who previously had a single normal vaginal delivery 15 years ago had her intrauterine copper device (IUCD) (MLZ380) inserted for contraception in the family planning clinic 2 years before she was first seen. The insertion was claimed uneventful and she had no particular problems after insertion. She has been having unprotected contraception without being pregnant. One year after the IUCD insertion, patient went to the PAP cervical smear clinic. Unfortunately no coil thread was seen. Immediate ultrasonography failed to locate intrauterine coil but an abdominal x ray showed IUCD in pelvis (Figure 1a and 1b).

On her first encounter with our department, she was complaining of occasional lower abdominal discomfort with the translocated IUCD but otherwise well. She was free from any bowel or urinary symptoms and had no problems with sexual intercourse or vaginal discharge. Abdominal examination and vaginal examination were unremarkable. Gentle per rectum examination did not show any obvious signs of the IUCD. Vaginal USG and X rays were repeated confirming the diagnosis of translocated IUCD. Meanwhile patient was put on oral combined contraceptive pills for additional contraceptive method.
KUB showed Radiopaque IUCD is seen in superior aspect of the pelvic cavity, below the left sacral alar.

Lateral abdominal x ray showed IUCD seen in presacral space. Ultrasound both vaginal and abdominal both failed to locate the IUD within the uterus. Patient was very keen to have the IUCD removed as it was causing her abdominal discomfort and also mental discomfort having known of a dislocated foreign body. Patient was aware of the risk including open surgery, bladder and bowel injury including the need to resect part of the bowel or bladder and stoma insertion. Patient insisted to have the IUCD removed despite the potential risks.

Diagnostic laparoscopy with pre-operative bowel preparation and the possibility of laparotomy, colonoscopy, bowel resection and or bladder repair was conducted with the presence of the surgical team. Diagnostic lap showed T shape IUCD over sigmoid colon with one arm seen while the remaining of the IUCD appears to be embedded within the rectum (Figure 2). Examination under anaesthesia and colonoscopy was done by surgical team revealing a foreign body felt at 10 cm from anal verge and on table sigmoidoscopy found full thickness erosion of IUCD at 12 cm.

It was decided by the surgical team where she had an anterior resection of the rectum, on table lavage and primary anastomosis via a midline laparotomy. Patient recovered well post operatively and sent home at day 7. Histopathology showed IUCD but no obvious pathology. Follow up at one month, patient was well with daily bowel opening. Both chest and abdominal x rays were unremarkable. Further follow up at 3 months patient remained well and the case was closed.

Discussion

IUCD is safe and a commonly used long term method of contraception. Associated complications include bleeding, infection, uterine perforation and subsequent migration to adjacent organs which is the most severe amongst all complications. The perforation is thought to occur at the time of insertion or occur due to chronic inflammatory reaction to the copper-containing foreign object leading to gradual erosion through the uterine wall (Darlong et al., 2009). Multiple reports of coil migration has been reported including large bowel e.g. rectosigmoidal region (Darlong et al., 2009), small bowel (Oxby et al., 2006), appendix (Katara et al., 2004), urinary bladder (Wei et al., 2003) and ureter (Qublan and Dabbas, 2002) while a Cochrane review confirmed the risk of such complications remains similar regardless the type of copper coil used (Kulier et al., 2007).

Although perforation may be suspected when patient complaint of pain or bleeding immediately after insertion, a large proportion of cases remain asymptomatic even up to 12 years after insertion (Mulayim et al., 2006). Perforation and migration is usually suspected when the IUCD string is no longer visible at the external os. It is essential to diagnose the position of the IUCD and consider its removal as malpositioned IUCD may leads to pregnancy while migrated IUCD may cause severe morbidity depending on the organ it migrated to. A migrated IUCD towards the urinary bladder may stone formation (Wei et al., 2003), while migrating to large bowel such as sigmoid colon or rectum may lead to symptoms such as adhesions, abdominal pain, bowel obstruction, volvulus, bowel perforation or fistula formation (Oxby et al., 2006; Mulayim et al., 2006).

First line diagnosis of a migrated IUCD should include an ultrasound and abdominal x-ray. Physical examination including a rectal examination may also be of help, although IUCD migrated to the upper part of the rectum and beyond may not be felt during rectal
examination as in our case. CT scan be of benefit in locating the area of migration (Oxby et al., 2006), however endoscopic surgery e.g. laparoscopy, cystoscopy, colonoscopy, remains the ultimate diagnostic and management tool (Mulayim et al., 2006).

It is a general consensus that surgical removal of migrated IUCD for symptomatic patient must be performed but surgical removal on asymptomatic patients remains controversial. Reports have suggested patient may benefit from conservative management however only restricted to those where migration did not perforate adjacent organs such as bowels and bladder (Markovitch et al., 2002) while traditionally, the World Health Organisation (WHO) in 2002 recommended a displaced IUD should always be removed.

Once the exact location of the IUCD can be deduced and the decision of surgical removal is made, it is important to plan the surgery as part of a multidisciplinary team involving the necessary specialties such as surgeons or urologist. Potential complication during removal such as organ perforation (e.g. bowel, bladder) and potential surgery such as resection of bowel and stoma insertion should be discussed in advance. As a result, all diagnosis and treatment can be performed at the same setting as it has been demonstrated in our case.

**Conclusion**

Our case demonstrated a migrated IUCD can have its large proportion migrated into the rectal cavity while despite rectal perforation, it can remain relatively asymptomatic for over 2 years. Removal of such migration often require detail investigations and multi-disciplinary involvement to ensure safe removal and in a single operative occurrence.

**Conflict of interest statement:** We declare that we have no conflict of interest to disclose.

**Reference**


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