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COLOUTERINE FISTULA CAUSED BY INTRAUTERINE DEVICE MIGRATION: A CASE REPORT

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Abstract

Intrauterine device (IUD) is simple and long-term medical device contraception. The IUD is a one of safety long duration contraception with several systemic side effects. But it can also cause morbidity by migration into another organ. IUD migration is a one of rare complication. We present a 28-year-old woman came to surgery department presented with hematoschezia when menstrual period since one month ago. Physical examiation showed hemodynamically stable and no abnormality. According to pelvic x-ray examination showed corpus allienum of IUD projected in pelvic cavum as high as foramen III-IV sacralis anterior. Patient also examined for CT-Scan that showed corpus allienum 1000-2000 HU density (T-shape IUD) in uteri cavum penetrate right posterolateral wall of uteri into sigmoid colon as high as S3 vertebrae followed by pneumoperitoneum of Douglas cavum. Colonoscopy showed rectal bleeding due to corpus allienum of expulsion of IUD. IUD extraction may lead to difficulties using colonoscopy so she planned to laparoscopic procedure. Possible laparoscopic options for IUDs embedded in the bowel include device extraction and intracorporeal suturing, or resection of the affected segment with primary anastomosis. She underwent a laparoscopic surgery to IUD extraction, adhesiolisis, and colouterine fistula repair.

Keywords: Colouterine Fistula; intrauterine device; migration;

INTRODUCTION

Intrauterine devices (IUDs) are the most well-known, long-term and modern method of contraception (Mona et al., 2020). The IUD is a a long duration contraception with few systemic side effects, but it can cause significant morbidity following migration into another organs. IUD migration can cause several disease such as obstruction, perforation, ischemia, mesenteric injury, strictures and fistulae (Weerasekera et al., 2014). The incidence of uterine perforation by IUD is reported to be between 1.3 and 1.6 per 1000 insertions (Akpınar & Altun, 2014). The proportion of IUD intestinal penetration in large intestine especially sigmoid colon were 40.4% followed by small intestine (21.3%), and rectum (21.3%) (Aliukonis et al., 2020).

Retrieval of IUDs is commonly done using colonoscopic and laparoscopic techniques (Weerasekera et al., 2014). Colonoscopy is effective when the device is in the lumen or inner part of the wall, but it may be challenging if the device is partly embedded in adjacent structures, such as a complex lesion like a colo-colic fistula. In such cases, a laparoscopic procedure is preferred for IUD extraction. Laparoscopic options include device extraction and intracorporeal suturing, or resection of the affected segment with primary anastomosis. According to Maggiori & Panis, (2013) Laparoscopic approaches have several advantages such as reduced tissue trauma, lower postoperative pain, early return to function, and a lower risk of intra-abdominal adhesions compared to other methods(M. Huh et al., 2018; B. F. Santos et al., 2017).

We report the case of Indonesian woman who suffer hematocezia when menstrual period which caused by intrauterine device migration complicated a colouterine fistula and treated with laparoscopic surgery.

RESEARCH METHODS

A 28-year-old woman came to surgey department at 19/11/2022 and presented with hematocezia when menstrual period since one month ago. Hematocezia worsen over time. Patient didn't have comorbidity such as diabetes melitus, hypertension, vardiovascular disease, hematology disease, astma, and chronic cough. Two monts ago, patiens suffer vaginal discharge and has history of sectio caesarean in 2017.

Physical examination showed moderate sick with GCS E4V5M6. Vital sign showed blood pressure 110/70 mmHg, heart rate 80x/m, respiration rate 20x/m, SpO_2: 99% (Alghadir et al., 2014). General examination heat to toe showed no abnormalities. Vaginal touche showed no fluxus, flour, closed porti, normal Corpus Uteri Ante Fleksi (CUAF), appendix D/S showed no mass and tenderness.

Laboratorium examination showed Hb : 12,2 mg/dL, Leucocyte : 8.790 cells/µL, Thrombocyte : 275.000 cells/µL, PT/APTT : 10,3 second / 29,10 second. Billirubin Total/Direct/Indirect : 0,22mg/dL / 0,08mg/dL / 0,14 mg/dL , Albumin : 4,90 g/dL. GDS : 96 mg/dL, Ureum / Creatinine : 8,4 mg/dL / 0,59 mg/dL. Electrolyte Na : 141 mEq/L, K 3,43 mEq/L, Cl 112 mEq/L. Negative antigen swab of SARS-CoV-2.

The colonoscopy with indications of rectal bleeding showed IUD expulsion. Pelvic anteroposterior / lateral x-ray examination showed corpus allienum of IUD projected in pelvic cavum as high as foramen III-IV sacralis anterior (Figure 1). Colonoscopy showed rectal bleeding due to corpus allienum of expulsion of IUD, internal hemorrhoid and non specific colitis (Figure 2). Patient also examined for CT-Scan and showed CT Scan examination showed corpus allienum 1000-2000 HU density (T-shape IUD) in uteri cavum penetrate right posterolateral wall of uteri into sigmoid colon as high as S3 vertebrae followed by pneumoperitoneum of Douglas cavum. There was no free fluid level in intraabdomen (Figure 4). She planned to laparoscopy and extraction of IUD in operating room by Digestive Surgeon join with Obstretician.

Laparoscopic surgery showed some finding, first omentum adhesion in right inferior anterior abdominal wall. Second, adhesion of sigmoid colon to right postior lateral uterus. Third, tail of IUD penetrates to sigmoid colon and T of IUD still in uterus

(Figure 4). So, patient conducted adhesiolisis and opening the colouterine fistula. IUD was extrated from sigmoid colon and sutured the defect in the sigmoid colon.

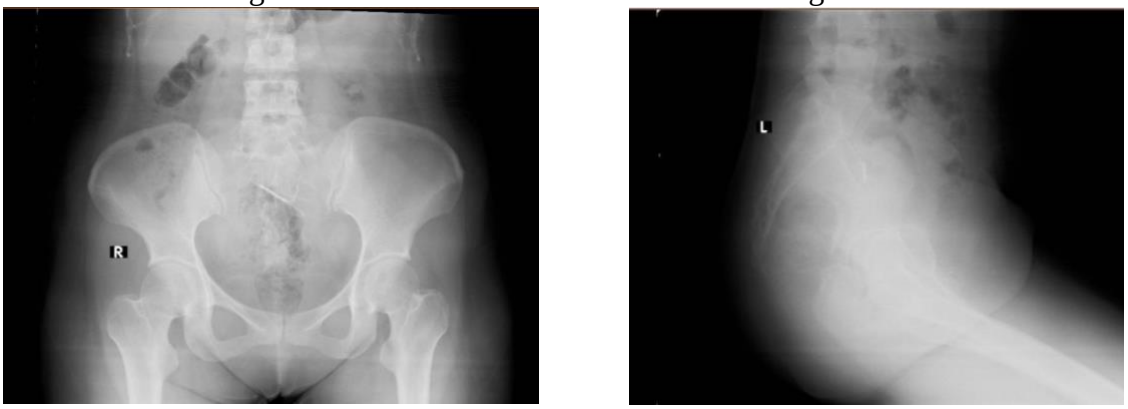

Figure 1. Pelvic anteroposterior and lateral x-ray examination

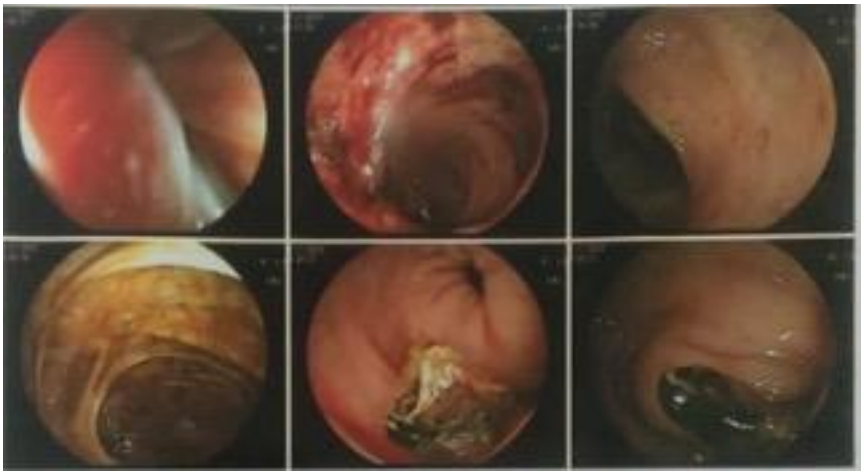

Figure 2. Colonoscopic Examination

Colonoscopic evaluation showed that hemorrhoid interna in anal segment, active bleeding and blood clot 50 cm in rectum segment. Corpus alienum like a metal 20cm near from anal segment. Forcep biopsy examination showed hard and bleeding in near corpus alienum. Colon descenden, tranversum, ascenden, caecum, and illeum has no abnormality.

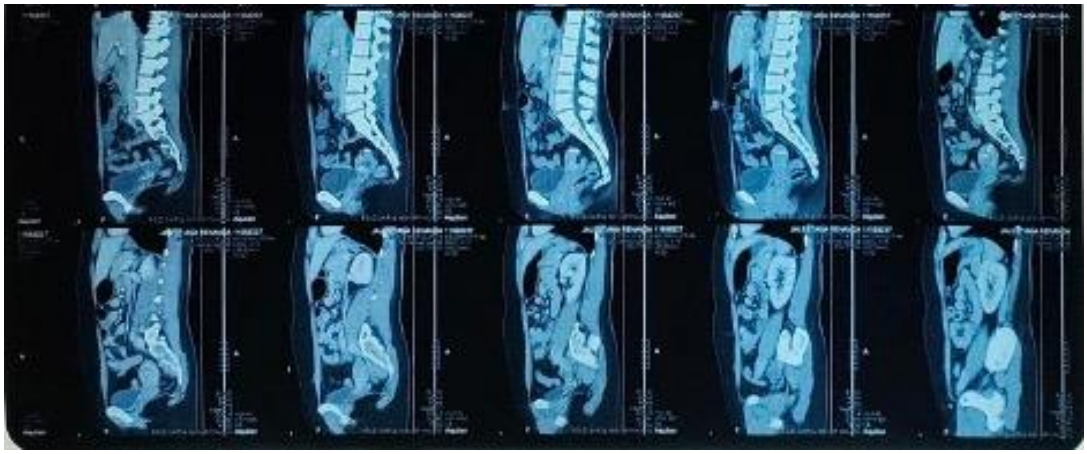

Figure 3. CT-Scan examination

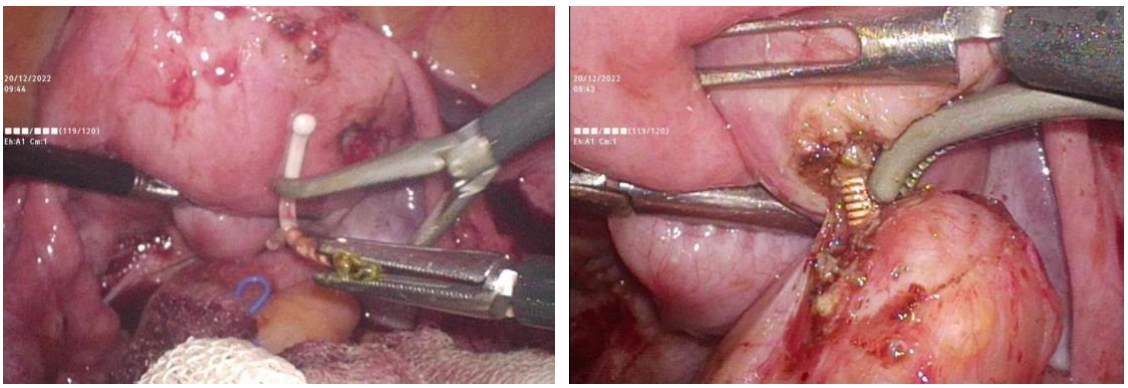

Figure 4. Laparoscopic surgery

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RESULT AND DISCUSSION

We present our case because it is extremely rare. Almost two-thirds of migrating IUD is generally located inside the uterine cavity. However, according to the study made by Cetinkaya et al. most common extra-uterine location of lost IUDs is around the uterosacral ligaments (Cetinkaya et al., 2011).

Patient presenting hematoschezia when menstrual period. The symtomps of IUD migration consist of acute abdominal pain, irregular vaginal bleeding, or bloody stool occurs. The ultrasound examination can assist in distinguishing ectopic IUDs from other causes (Zhou et al., 2018). Other possible pathological processes that could involve a concurrent uterine and bowel perforation could be trauma, neoplasm, or even aggressive infectious disorder (Carroll et al., 2022).

In this case, colonoscopy used to identify the possible cause of rectal bleeding. Colonoscopic and laparoscopic techniques commonly being used for retrieval of IUDs. Colonoscopy is useful when the device in the lumen or embedded in the inner part of the wall. Colonoscopic retrieval may lead to difficulties if the device is partly embedded in adjacent structures. A complex lesion such as a colo-colic fistula would be extremely difficult to identify at colonoscopy (J. M. Huh et al., 2018).

In this case, the IUD extraction may lead to difficulties using colonoscopy so she planned to laparoscopic procedure (Banerjee et al., 2012). Possible laparoscopic options for IUDs embedded in the bowel include device extraction and intracorporeal

suturing, or resection of the affected segment with primary anastomosis. The advantages of laparoscopic approaches include : reduced tissue trauma, lower postoperative pain, and early return to function and lower risk of intra-abdominal adhesions (A. P. Santos et al., 2017).

CONCLUSION

Although rare, the migration of intrauterine devices to the colon can be a serious complication. The management of such cases can be a challenging decision for both the patient and the surgeon. Typically, IUD migration is accompanied by specific symptoms. However, in this particular case, colonoscopy may difficulties to extract the IUD. Therefore, it is highly recommended to use laparoscopic surgery to extract the IUD.

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