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Migration of an IUD into the Myometrium Associated with a Painful Ovarian Cyst: A Case Report

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Abstract

The intrauterine device (IUD) is one of the most effective and widely used contraceptive methods worldwide. Secondary migrations are varied but rare when involving the myometrium, according to the literature. We report the clinical case of a 22-year-old patient, gravida 2, para 2, with a history of cesarean section eleven (11) months earlier, (during which an IUD had been inserted). she had consulted for isolated pelvic pain. Pelvic ultrasound incidentally revealed an IUD migrating into the myometrium, associated with a large ovarian cyst. The diagnosis was confirmed during exploratory laparotomy, which allowed for cystectomy followed by IUD removal. Histological examination of the ovarian cyst revealed a benign serous cystadenoma. Postoperative recovery was uneventful.

Keywords: Migration- intrauterine device (IUD) – Myometrium – Ovarian cyst- Painful

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Introduction

The intrauterine device (IUD) is a long-term contraceptive method that is simple, effective, generally well tolerated and inexpensive (Onalan and al, 2009). Its contraceptive mode of action is located in the uterine cavity. It makes it possible to ensure long-term contraception without raising the problem of compliance. IUD migration is a rare but serious complication, with recent studies reporting rates ranging from 1.3 to 18 per 1,000 insertions (Arslan et al., 2009). Other complications may be associated with and reveal such migration most often asymptomatic. These may include a large painful ovarian cyst, a rare occurrence but one that has been observed in the gynecological emergency unit of the University Hospital Center of Bouaké, providing the rationale for the study of our clinical case.

Case Report

This was a 22-year-old patient with no significant medical history. She was gravida 2, para 2, and had delivered by cesarean section (indicated for acute fetal distress) on January 6, 2024. An intrauterine device (IUD) had been inserted during the procedure. She presented 11 months after her cesarean section to the gynecological emergency unit of the University Hospital Center of Bouaké (on December 5, 2024). The reason for consultation was severe isolated pelvic pain evolving for one week. Physical examination on admission showed: good general condition, afebrile status, stable hemodynamics, a soft abdomen, and pelvic tenderness on palpation. The speculum examination and vaginal examination were unremarkable. Endovaginal ultrasound incidentally revealed an IUD migrating into the posterior corporal myometrium, perforating two-thirds of the serosa, associated with a large fluid-filled cyst on the right ovary (33 × 24 mm) and a left ovarian microfollicular dystrophy (45 × 24 mm) (Figure 1). Following our clinical and paraclinical examinations, we concluded that there had been partial intramyometrial migration of the intrauterine device, which was discovered incidentally, associated with a large, painful cyst on the right ovary on a scarred uterus. An exploratory laparotomy was indicated and performed under spinal anesthesia. Surgical exploration revealed: pelvic adhesions, a uterus with a large right ovarian cyst (7 × 6 × 5 cm), smooth-surfaced, firm-elastic, spherical in shape, containing serohematic fluid (Figure 2), and the presence of a T-shaped IUD visible by its two horizontal arms (Figure 3), partially embedded in the posterior corporal myometrium, with the vertical stem perforating two-thirds of the serosa. Therapeutic procedures, performed sequentially, included: careful adhesiolysis, cystectomy, and removal of the IUD (Figure 4). In summary, this was a case of partial intramyometrial migration of an IUD associated with an organic ovarian cyst in a scarred uterus (history of cesarean section for acute fetal distress 11 months earlier). The

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immediate and late postoperative outcomes were uneventful. Histological examination of the ovarian cyst revealed a benign serous cystadenoma.

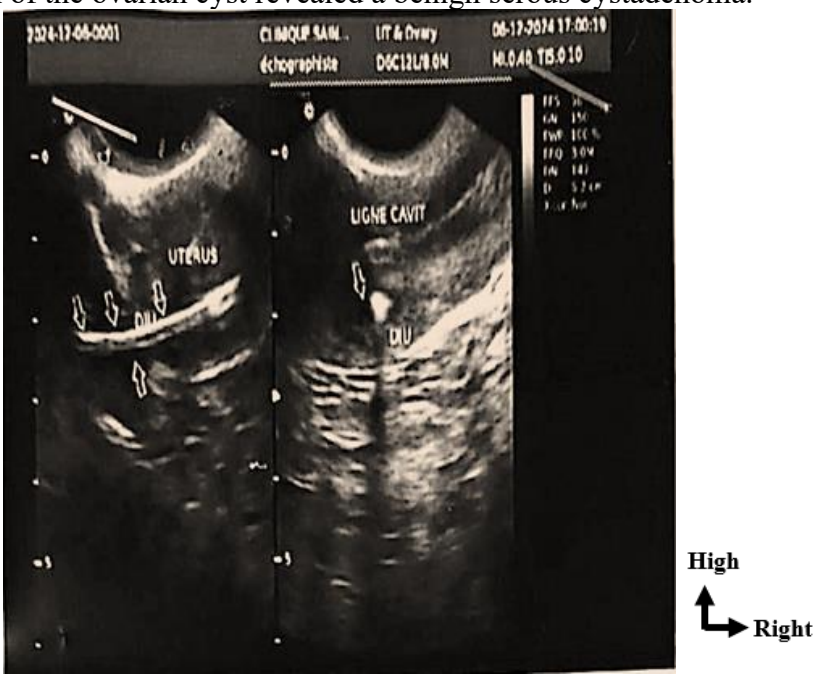

Figure 1: The migratory IUD in the posterior corporeal myometrium perforating 2/3 of the serosa (ultrasound image)

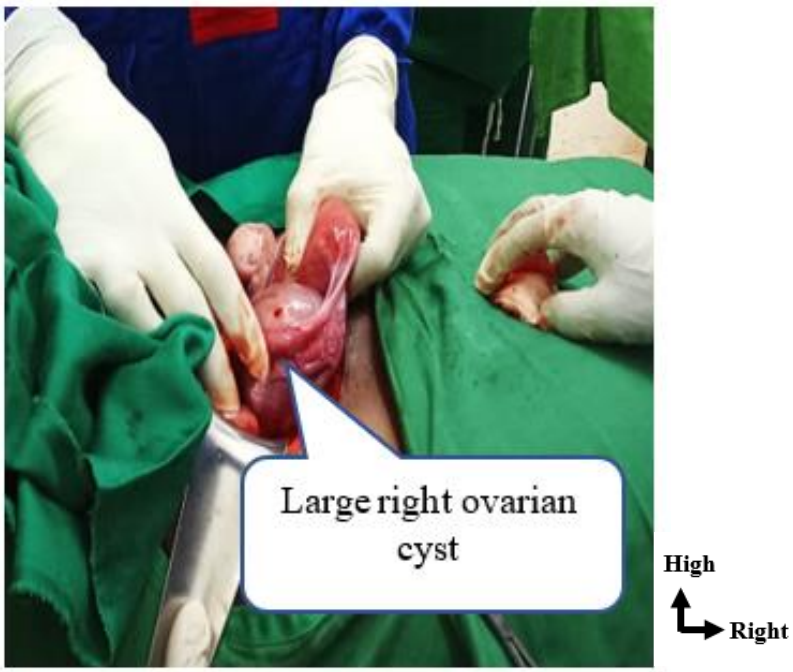

Figure 2: Large right ovarian cyst

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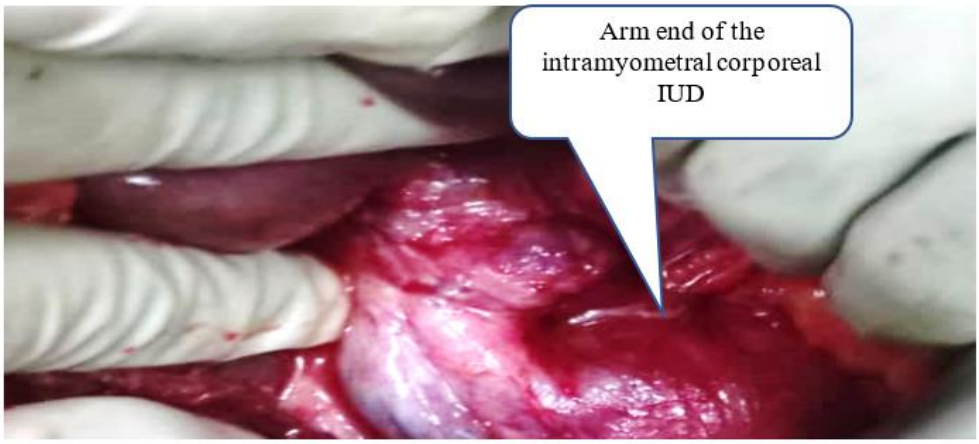

Figure 3: Intraoperative view of the IUD arm in the posterior corporeal myometrium, attached to the cyst ovarien

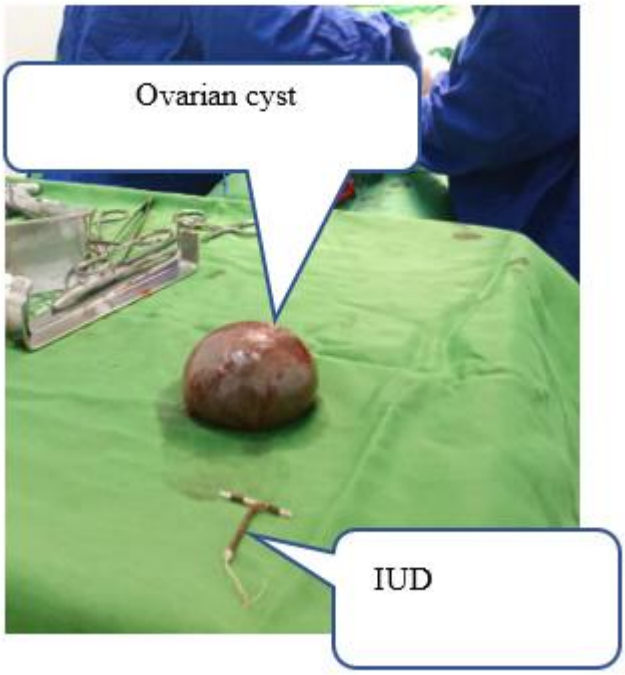

Figure 4: Intraoperative view of the ovarian cyst and IUD

Discussion

The IUD is a reversible and effective contraceptive method, but it is not without complications (Verim L, et al., 2015). Partial or total perforation of the myometrium during IUD insertion is more likely in the presence of a myometrial abnormality (particularly a scarred uterus) or due to an undiagnosed hypoplastic uterus, retroversion, or extreme anteversion (Haonas

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et al., 2006). Our patient had a history of cesarean section for acute fetal distress 11 months earlier. The perforation rate appears to depend on the practitioner's expertise and, especially, on the number of insertions performed (Cristinelli S, et al., 2006). This migration may be favored by local inflammation induced by copper IUDs (Joual et al., 2004). Symptomatology usually becomes more evident at a later stage, including abdominal pain (30%) and unwanted pregnancy (25%) (Cristinelli S, et al., 2006). When the IUD is located outside the uterine cavity, it can be found either in the pelvis or the abdomen, in decreasing order of frequency: omentum, rectosigmoid, peritoneum, bladder, appendix, small intestine, adnexa, and iliac vein (El Kettani et al., 2007). Our patient presented with severe isolated pelvic pain, resistant to analgesics. Endovaginal ultrasound revealed a migrating IUD in the posterior corporal myometrium, perforating the serosa, associated with a large right ovarian cyst. The indication for exploratory laparotomy was established and performed, which confirmed the diagnosis and allowed for treatment of the complications. This approach has also been described in the literature (Boutaina et al., 2014). Removal of the ectopic IUD is recommended due to the risk of adhesions and inflammation, which may lead to peritonitis, intestinal perforation (Mamadou B, et al., 2020), or acute intestinal occlusion (Ranjeet Brar, et al., 2010). The migrating intrauterine device was discovered incidentally during the treatment of pelvic pain suggestive of a large right ovarian cyst on a scarred uterus in our. The onset of abdominopelvic pain, digestive symptoms (diarrhea, bowel obstruction), or urinary tract infection should alert the physician to the possibility of a related complication in patients with a history of IUD insertion.In cases of suspected IUD migration, localization can be achieved with abdominal or endovaginal ultrasound, generally combined with plain abdominal radiography. Computed tomography (CT) or magnetic resonance imaging (MRI) may be useful for precise localization of an intra-abdominal IUD (Cristinelli S, et al., 2006).

Conclusion

The IUD is a widely used mechanical contraceptive method among our patients in Bouaké. Its insertion is a simple medical procedure. However, it can lead to major complications, such as partial intramyometrial migration. Most often asymptomatic, this migration may be incidentally discovered through a revealing associated complication, such as a painful ovarian cyst. Endovaginal ultrasound can help suggest the diagnosis of intramyometrial IUD migration. In settings with limited technical resources, exploratory laparotomy allows for cystectomy and IUD removal. However, laparoscopy remains the best diagnostic and therapeutic approach. Adequate management of an IUD inserted for contraception requires proper insertion technique, especially during cesarean section, and careful post-insertion follow-up.

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