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Migration Into the Myometrium of the IUD Associated with a Painful Ovarian Cyst

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Abstract

The intrauterine device (IUD) or IUD is the most widely used contraceptive method in the world. Its secondary migrations are varied but rare when it comes to the myometrium according to the literature. We report a clinical case of migration of the IUD into the myometrium whose diagnosis was made eleven months after its insertion during a caesarean section, associated with a large painful right ovarian cyst. The diagnosis was suspected on pelvic ultrasound and then confirmed during exploratory laparotomy. A cystectomy with removal of the complete IUD was performed and histological analysis of the cyst concluded that there was a serous cystadenoma of the right ovary (benign ovarian tumor). The post-operative follow-up was simple.

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

Introduction

The IUD or 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. However, its side effects, complications and contraindications must be known in order to optimize its action (Boudineau and al, 2001). Complications include uterine perforations, which can be partial when only part of the IUD pierces the wall of the uterus or cervix (Zakin and al, 1981). Uterine perforations are rare (1.3 per 1000 placements) according to large clinical trials (Treiman K and al). Other complications may be associated, such as a large painful ovarian cyst, rare but encountered in the gynaecological emergency department of the University Hospital of Bouaké, constituting all the interest aroused by our clinical case.

Clinical case

It was a 22-year-old patient second procedure, second parse with a history of caesarean section on January 06, 2024, during which an IUD was inserted. She was consulting in the gynecological emergency department of the University Hospital of Bouaké on December 5, 2024, 11 months after her caesarean section for isolated intense pelvialgia evolving for a week, resistant to analgesic treatments. The clinical examination on admission found a patient in good general condition, the abdomen was supple and painful to palpation. Speculum examination and vaginal examination did not objectify the IUD. Endovaginal ultrasound revealed the device in the posterior myometrium, 2/3 of which perforated the serosa, a large fluid right ovarian cyst of 33 to 24 mm, a left ovarian dystrophy (45 to 24 mm) microfollicular **(Figure 1).** We concluded that the IUD had a secondary migration into the posterior corporeal myometrium associated with a large painful right ovarian cyst. The indication of an exploratory laparotomy placed and performed had allowed us to highlight: pelvic adhesions (utero-parietal; utero-adnexal and bilateral intestinal), a large straight ovarian cyst (7× 6 × 5cm in diameter) with a smooth surface, of renitent consistency, ball-shaped, with sero-haematic content **(Figure 2),** the presence of a T-shaped IUD visible from both ends of its horizontal branch (IUD arm) **(Figure 3)** in the posterior corporeal myometrium and its vertical branch perforating 2/3 of the serosa. Our therapeutic attitude consisted of careful adhesiolysis, cystectomy with removal of the complete IUD **(Figure 4).** The post-operative follow-up on the third day was simple. Histological analysis

of the cyst revealed a serous cystadenoma of the right ovary (benign ovarian tumor).

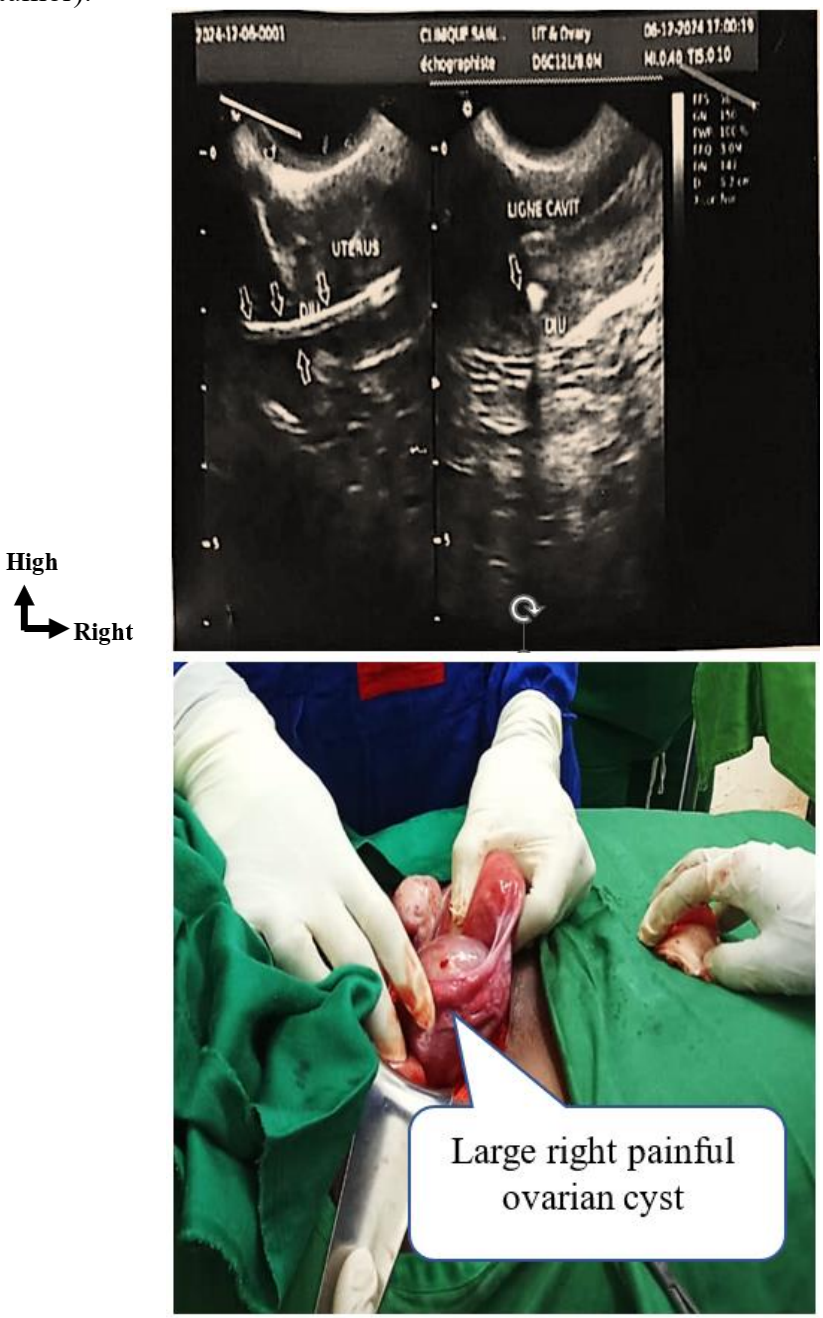

Figure 1: The migratory IUD in the posterior corporeal myometrium perforating 2/3 of the serosa (ultrasound image)

Figure 2: Large right ovarian cyst

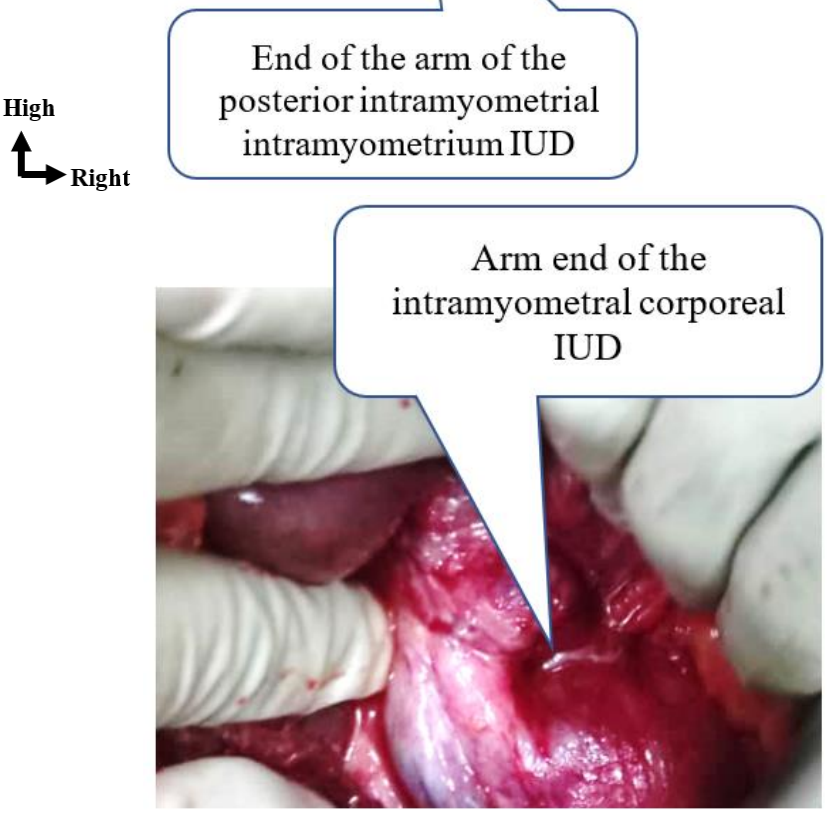

Figure 3: Intraoperative view of the IUD arm in the posterior corporeal myometrium, attached to the cyst ovarien

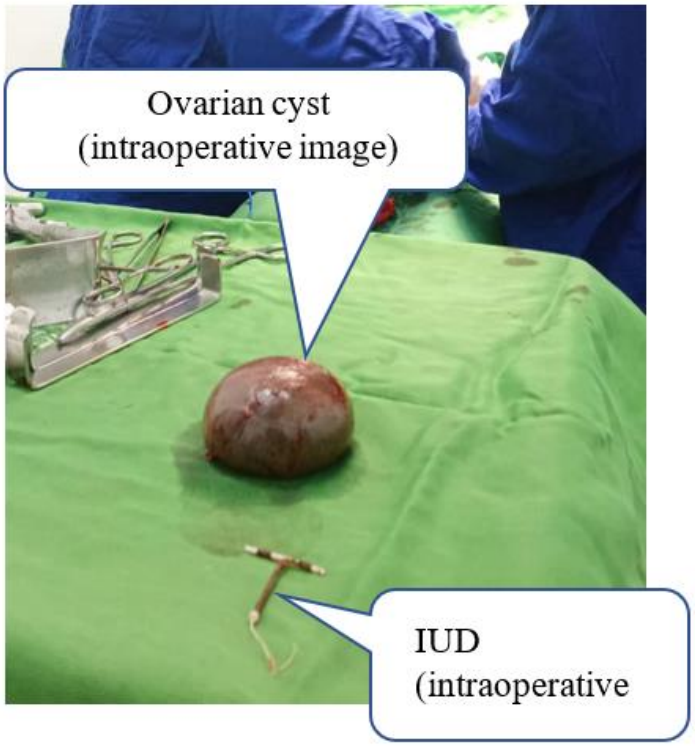

Figure 4: Intraoperative view of the ovarian cyst and the complete IUD

Discussion

The insertion of an IUD is a common technical procedure (Andersson and al in 1999). Partial or total perforation of the myometrium during this IUD insertion is all the more common when there is an abnormality of the myometrium (scar uterus in particular**)** or because of a hypoplastic uterus, a retroversion or a little-known hyper-anteversion (Haonas and al in 2006). This migration is thought to be favoured by local inflammation caused by copper IUDs (Joual and al in 2004). The patient may or may not be asymptomatic, with symptoms of repeated urinary irritation, or even terminal hematuria or pelvic pain**.** The factors favouring migration are multiparity, the scarred uterus, and the clumsiness of the operator (Nouri and al in 1999). Our patient in the postpartum period after her caesarean section with IUD insertion eleven months earlier had consulted urgently for isolated intense pelvic pain, resistant to the usual analgesics. Pelvic (endovaginal) ultrasound objectified a migrating IUD in the posterior corporeal myometrium perforating the serosa, associated with a large right ovarian cyst. The exploratory laparotomy had allowed us to confirm the diagnosis with numerous pelvic adhesions. The need for an exploratory laparotomy performed had a dual diagnostic and therapeutic interest. It has also been

described by some authors in the literature such as Kassa and al in 1999 , Boutaina and al in 2014. Monitoring after the insertion of an IUD would be necessary, consisting of carrying out regular check-up ultrasounds to check its correct positioning in order to avoid possible associated complications. According to the data in the literature, the clinical symptomatology of the migratory IUD is variable and this depends on its location and the type of IUD. This was discovered by chance during the treatment of a large painful right ovarian cyst without any other associated signs in our clinical case. The appearance of abdominal-pelvic pain, digestive signs (diarrhea, occlusive syndrome), urinary tract infection should alert the clinician to the possibility of an associated complication in the event of a history of IUD insertion.

Conclusion

The IUD is an effective contraceptive method and frequently inserted in our department. This act is not without possible complications. Secondary migration into the myometrium associated with a painful ovarian cyst was one of the rarest cases in Gynecology-Obstetrics of the University Hospital Center of Bouaké. Most often asymptomatic, the migration of the IUD can be discovered by chance by an associated complication, as was the case in our clinical case. Pelvic (endovaginal) ultrasound suspected the diagnosis and exploratory laparotomy has diagnostic and therapeutic interest. Adequate management of an IUD in the context of contraception requires good clinical and paraclinical monitoring after its insertion.

Conflict of Interest: The authors reported no conflict of interest.

Data Availability: All data are included in the content of the paper.

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Declaration for Human Participants: This work has been approved by the Bouaké University Hospital. The principles of the Declaration of Helsinki have been respected.

References:

1. Onalan, G., Mulayim, B., Toprak, T., Baser, E., & Zeyneloglu, H. B. (2009). Extrauterine displaced intrauterine devices: when should they be surgically removed?. Taiwanese journal of obstetrics & gynecology, 48(4), 415–416.
2. Boudineau, M., Multon, O., & Lopes P. (2001). Contraception par dispositif intra-utérin. Encycl MédChir- Gynécologie, 738-A- 09 ;7 p.

3. Zakin, D., Stern, W.Z., & Rosenblatt R. (1981). Complete and partial uterine perforation and embedding following insertion of intrauterine devices, classification, complications, mechanism, incidence, and missing string. Obstetrical and Gynecological Survey, 36(7) : 335-353.
4. Treiman, K., Laurie-Liskin, S.C.M., & Adrienne, Kols. (1995). Les DIU : état récent des informations. Population Reports (Séries B), Déc ; (6) :135.
5. Andersson, K., Ryde-Blomqvist, E., Lindell, K., Odlind, V., & Milsom, I. (1998). Perforations with intrauterine devices. Report from a Swedish survey. Contraception, 57(4), 251–255.
6. Haouas, N., Sahraoui, W., Youssef, A., Thabet, I. & Mosbah, A.T. (2006) Migration intra vésicale de dispositif intra-utérin compliquée de lithiase. Journal de Gynécologie Obstétrique et Biologie de la Reproduction, 35, 288-292.
7. Joual, A., Querfani, B., Taha, A., El Mejjad, A., Frougui, Y., Rabii, R., Debbagh, A., & El Mrini, M. (2004). Intravésical migration of an intrauterine contraceptive device complicated by stones.Prog Urol. Jun;14(3): 374-5.
8. Nouri, M., Fassi, M., Koutani, A., Ibn Attya, A., Hachimi, M., & Lakrissa, A. (1999). Migration intravesical d'un dispositif intrauterin. J Gynecol Obstet Biol Reprod. 1999 ; 28(2) :162-4.
9. Kassa, B., & Audra, P. (1999). Le stérilet migrateur à propos d'un cas et revue de la littérature. Contracept Fertil sex , 27 (10) :696-700.
10. Boutaina, L., Moulay, R. H., Abdelgheni, Z., Houda, F., & Jaouad, kouach. (2014). Le stérilet migrateur à propos de deux cas et revue de la littérature. Pan African Medical Journal, 19 : 361.57-45.