Case Report
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Deep infiltrating endometriosis surrounding T- shape copper IUD displaced into the lower anterior abdominal wall

Islam Magalov, MD, PhD, DSc
Rakhshanda Aliyeva, MD
Arzu Polukhova, MD

I Department of Obstetrics and Gynecology, Azerbaijan Medical University.

Correspondence:
Islam Magalov, MD, PhD, DSc
I Department of Obstetrics and Gynecology, Azerbaijan Medical University,
Baku, Azerbaijan
email: imaga@mail.ru
Phone: +994503116233

IUD insertion may cause potential dangerous consequences. A case of its migration to the lower anterior abdominal wall in a 36 year old patient was demonstrated. The T-shaped IUD was removed laparoscopically with surrounded tissue. Pathohistological examination of the removed tissue mass found out deep infiltrating endometriosis.

Keywords: Intrauterine contraceptive device, uterine perforation, migration, laparoscopy, endometriosis.

Introduction

Complications associated with the use of intrauterine contraceptive devices (IUDs) are the object of intent observation of gynecologists since they are implemented worldwide. Although, the method is considered relatively safe, it may cause some serious and potential dangerous consequences such as migration to abdominal cavity and adjacent organs due to the perforation of the uterus, which can lead to significant clinical problems [1,2]. Rare cases of abdominal wall swelling and abscess associated with unusual location for a displaced IUD are known due to the appropriate publications [3,4].

Case Presentation

A 36 year old patient (gravida 3, para 1) was admitted to our department after she underwent hysterosalpingography. She was a patient of infertility clinic following an incident of early miscarriage in 2012 with suspicion of IUD expulsion which was inserted 9 years ago. The patient was almost symptom free excluding mild pain in lower abdomen on the first day of her menses and missed threads of the coil. Abdominopelvic radiograph showed wandering IUD at right lower abdominal wall quadrant, approximately at the limits of the small pelvis (fig. 1). Sonography confirmed that the uterine cavity was empty.

She was operated by laparoscopic route. It was revealed that the IUD was migrated into the abdominal wall close to the bladder. Its location was marked by dense adhesions (fig. 2). Having freed from them and following the opening of retroperitoneum the target surrounded by infiltrated tissue was detected (fig. 3). En bloc dissection was impossible without getting into the bladder completely (fig. 4). After removal of the coil with tissue mass the hole in the bladder was sutured in two layers (fig. 5 and 6). Pathohistological examination of the removed tissue mass found out deep infiltrating endometriosis.

Discussion

According to the publications perforatio-According to the publications perforation of the uterus with IUDs occurs in about 0.12 to 0,68 per 1000 insertions [5]. The true incidence is likely higher because of the asymptomatic nature of the perforation [6]. The misplacement areas include the pelvis, peritoneal cavity and adjacent organs. Although, the majority of uterine perforations do not affect other organs, there are about 110 case reports about the migration of IUDs outside the uterine cavity and, in more than 2/3 of these cases they were located in the bladder with or without they being calcified [6,7]. Nevertheless displaced IUDs were also

Figure 1. Hysterosalpingography film which detected the coil outside the uterus.

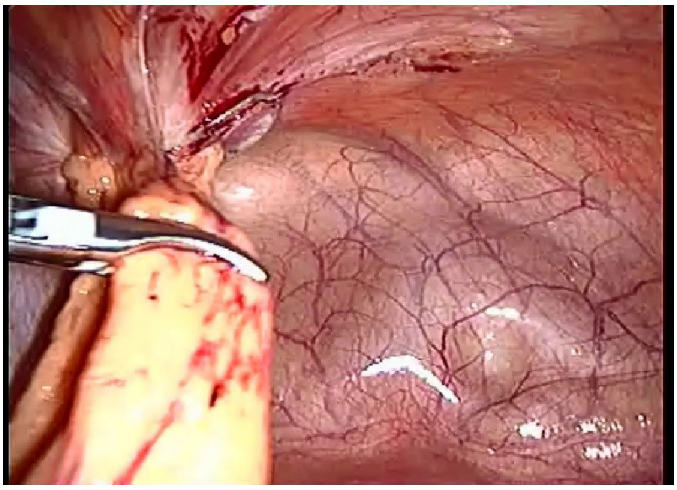

Figure 2. First look by entering into abdominal cavity.

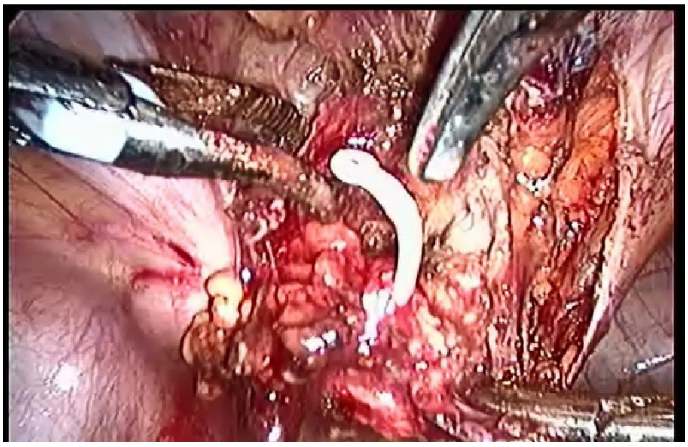

Figure 3. Detection of the IUD surrounded by dense fibrotic tissue in the abdominal wall.

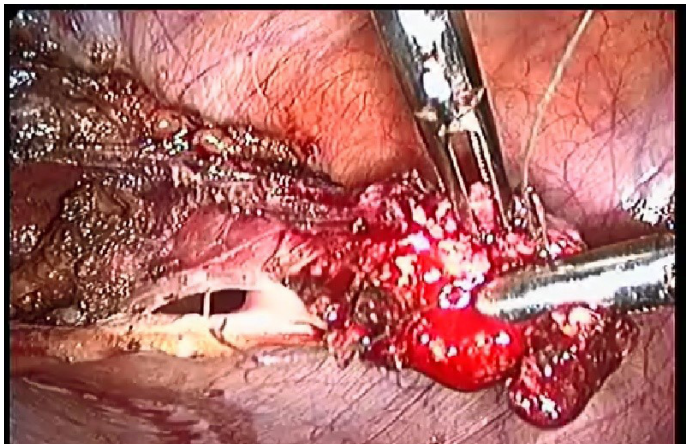

Figure 4. Opening of the bladder by en bloc dissection of the IUD with surrounded tissue.

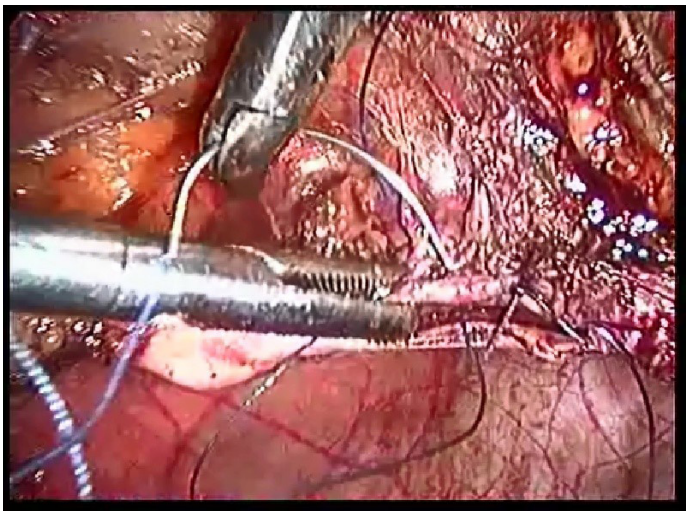

Figure 5. Sutured hole in the bladder

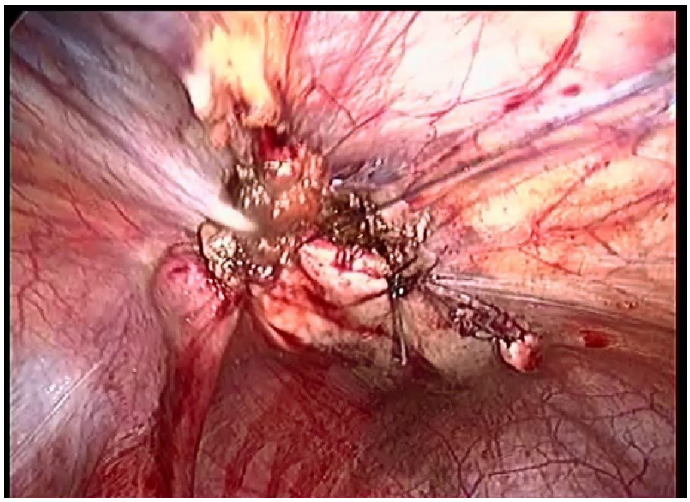

Figure 6. The last suture: peritonization

found in rectosigmoid colon [1, 8], loops of mid ileum [2], mesenterium [9], omentum [1,2], and even gastric serosa [10].

The exact mechanism that causes uterine perforation and migration of the IUD is not entirely known. There are some predisposing factors discussed in the literature, such as the uterine size, position, timing of the insertion, congenital uterine anomalies and former operations like previous Cesarean section [3].

A translocated IUD induces a dense fibroblastic reaction, granuloma development, cystic lesions and even abscess formation [3,4].

Revealed deep infiltrating endometriosis (DIE) in surrounding the IUD tissue in our case is an interesting finding which by, all means, deserves attention and requires further considerations concerning the questions 'how' and 'why'. No previously published report concerning such association was detected by Pubmed searching.

Missing strings during vaginal examination or unexpected pregnancy in patients with IUDs suppose its expulsion, though clinicians should assume that it is either dislocated or migrated until it is documented by visualization. [1,3,5] Even the presence of an IUD string visible through the cervical os is insufficient to exclude the possibility of a dislocated IUD [1,3,6].

The current guidance is that all misplaced IUDs should be surgically removed [1,5]. Therefore, the value of preoperational diagnostics cannot be underestimated.

To evaluate whether an IUD is within the patient (inside the uterus or dislocated) or expulsed, a plain X-ray film is the first diagnostic procedure [4]. Transvaginal sonography should be combined with abdominal X-ray to reach a definitive diagnosis [5].

However, sonography cannot accurately demonstrate the extent of myometrial or bladder or intestinal wall perforation, especially when the IUD has completely migrated outside of the uterus [5,7]. El-Hefnawy et al suggested that noncontrast CT be included in the differential diagnosis to depict the site of the dislocated IUD, anatomic relation between it and organs involved, and the extent of bladder injury [7].

As a majority of surgeons we have chosen laparoscopic route to remove the IUD. Based on personal experience, we can state that, to make the surgery more convenient and to avoid intra-operative 'surprises' the necessity of combination with hysteroscopy, cystoscopy and colonoscopy depending on situation is to be discussed.

Conclusion

Regardless of the fact that IUD insertion is a relevant and relatively safe method of contraception close follow up is needed to detect complications and subsequent management. DIE in tissue masses around the migrated to the abdominal wall coil is another attention deserving issue.

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