

CASE REPORT

Triple Intrauterine Devices: A Rare Case

¹Wint-Thida Htay, ²Sukson Chaivirattana, ³Amornrat Thanachivivat, ⁴Kuan-Gen Huang

ABSTRACT

This was the rare case of three intra-uterine devices (IUD) in one lady. One was lost, another was translocated intra-abdominally, and the other was still functioning for 20 years. This report highlighted the importance of in-depth knowledge of health education, proper diagnostic evaluation and the role of laparoscopy in this management.

Keywords: Extrauterine, Intrauterine device, Laparoscopy uterine perforation.

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BACKGROUND

The IUD is one of the popular reversible long-term contraceptive methods worldwide. Though spontaneous IUD expulsion is a concern, perforation and subsequent intraperitoneal migration is a serious but rare complication. In the large multinational study by Heinemann, et al., there was perforation about 0.9 per 1000 Cu-IUD and 1.1 per 1000 LNG-IUD insertions.¹

CASE REPORT

This study was approved by the Chang Gung Memorial Hospital Institutional Review Board. A 43-year-old lady with six children was admitted due to pain in hypogastrium. She had been experiencing dysmenorrhea and menorrhagia for a year prior and worsened during the

last three menstrual periods. She was recently diagnosed as type 2 diabetes mellitus at body mass index (BMI) 31 kg/m² and maintained on oral hypoglycemic medications. In the pelvic examination, there was an enlarged 16 weeks sized uterus with slight tenderness. There was adenomyosis together with IUD in the uterus and unremarkable adnexa in sonogram (Fig. 1).

She has also a wonderful pertinent history of three episodes of IUD insertions without removal. Initial placement was made after her second childbirth vaginally in 1991. Within that same year, she unexpectedly became pregnant. She gave birth to her third child in 1992 and the second IUD was placed without any consultation with the healthcare provider. Less than 2 years after, in 1994, she delivered her fourth child, and the third IUD was inserted again. The patient had no recollection of IUD removals nor expulsions. Information regarding the dates or proximity of deliveries with IUD placements was unavailable.

With the provisional diagnosis of adenomyosis, the patient underwent total laparoscopic hysterectomy (TLH) and bilateral salpingectomy (BSO). During operation, there was revealed a globularly enlarged uterus about 14 cm with a multiloated Cu-IUD adherent to the right ovary and another IUD to the right posterolateral side of the uterus (Fig. 2). There was no any complication and injury to adjacent structures. After TLH and BSO were done, systematic laparoscopic exploration and post-operative sonography of the whole abdomen in search for other foreign bodies yielded no additional findings. The postoperative condition was uneventful.

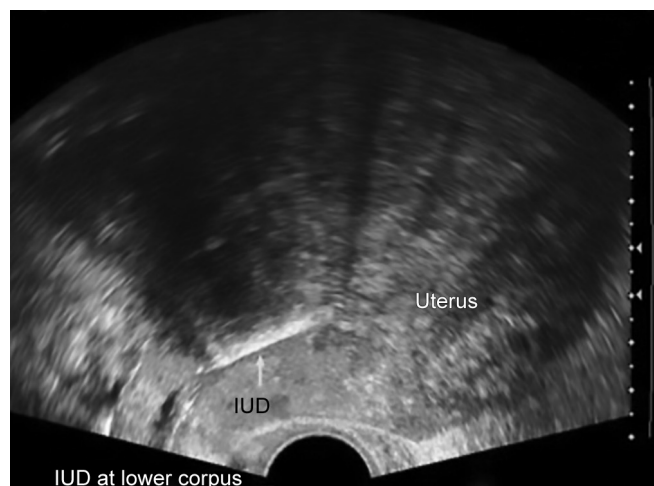


Fig. 1: Intrauterine device in the uterine cavity in sonogram

¹Assistant Lecturer, ^{2,3}Lecturer, ⁴Associate Professor

¹Department of Obstetrics and Gynecology, University of Medicine 2, Yangon, Myanmar

²Department of Obstetrics and Gynecology, Phra Nang Klao Hospital, Bangkok, Thailand

³Department of Obstetrics and Gynecology, General Police Hospital, Bangkok, Thailand

⁴Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Linkou and Chang Gung University College of Medicine, Kweishan, Taoyuan, Taiwan

Corresponding Author: Kuan-Gen Huang, Associate Professor, Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Linkou and Chang Gung University College of Medicine, Kweishan, Taoyuan, Taiwan, e-mail: kghuang@ms57.hinet.net

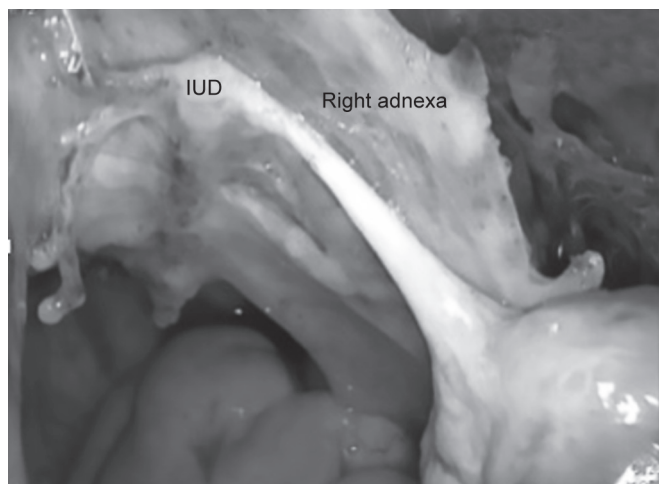


Fig. 2: Laparoscopic finding of Intrauterine device at right adnexa

DISCUSSION

Uterine perforation is a severe but infrequent complication in IUD users. It occurs mostly during insertion, but the diagnosis was usually delayed.²⁻⁴ Multiparity postpartum status and breastfeeding (>1 per 100) were associated with higher perforation rate.^{5,6} The precise mechanism was not well understood. Goldstuck and Wildesmeersch tried to elucidate on the underlying mechanism of IUD expulsion and perforation using the vectorial analysis of myometrial contraction forces on intrauterine devices. They cited excessive insertion pressure and disproportionate size of the device to the intracavitary surface area causing net asymmetrical uterine forces as possible mechanisms of perforation.⁷

When IUD string or the mainframe was not visualized, the first thing to do was to rule out the possibility of IUD translocation within the abdominal cavity. In a retrospective study, it should be started with pelvic ultrasonography, preferably with three-dimensional (3D) imaging to locate IUDs within the pelvis better. Supine plain radiography of the whole abdomen up to the level of the diaphragm might be used next as an adjunct to find out it in the upper abdomen if initial workup was negative. Finally, magnetic resonance imaging (MRI) or computed tomography (CT) scan can be utilized when missing IUD was not detected by previous imaging methods.⁵ It had been suggested that extrauterine IUDs may be left untouched if there were no associated symptoms.⁸⁻¹⁰ However, the intraperitoneal IUD can be associated with some adhesions and injury to nearby structures (bowel and bladder). The risks of these morbidities may be more severe with time. Thus, prompt removal was also recommended.^{5,10} The laparoscopic approach has become the first choice in the management of such complications as it is not only less invasive but also prompt postoperative recovery.¹¹

CONCLUSION

Health education is the basic but very important thing how to use and consult the health care provider when it is not detected. It can be provided insights into the possible mechanism of body reactions to IUDs that may help to improve the insertion practices and design of IUDs. It was also emphasized the need for the diligence in accounting for seemingly lost IUDs with proper imaging techniques as well as prompt removal of wandering IUDs using the laparoscopic approach.

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