International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622

www.gynaecologyjournal.com
2019; 3(3): 74-77
Received: 10-03-2019
Accepted: 12-04-2019

Dr. Keerthana Ashwin
Postgraduate, Dept Obgyn, Sri Ramachandra medical college and hospital, Chennai, Tamil Nadu, India

Dr. Vasantha Lakshmi
Associate Professor, Dept Obgyn, Sri Ramachandra Medical College and Hospital, Chennai, Tamil Nadu, India

Correspondence
Dr. Vasantha Lakshmi
Associate Professor, Dept Obgyn, Sri Ramachandra Medical College and Hospital, Chennai, Tamil Nadu, India

"Fate of the missing IUCD tails" Migration of intrauterine contraceptive device-Factors associated, exploration strategy and management at a tertiary care centre

Dr. Keerthana Ashwin and Dr. Vasantha Lakshmi

DOI: https://doi.org/10.33545/gynae.2019.v3.i3b.14

Abstract
Aim: To analyse the factors associated, clinical presentation, exploration strategy and management in patients with impacted and migrated IUCDs at a tertiary care centre.
Materials and Methods: A retrospective study in a tertiary care institutional hospital between January 2016- January 2017 among 5 patients diagnosed with impacted and migrated IUCDs.
Results: All patient with impacted IUCD presented with pain abdomen. The incidence of IUCD migration seems to be increased in patients who underwent previous caesarean section as seen in this case series (75%). A weakened myometrium may pose as an antecedent risk for such perforation and migration of IUCDs. All patients underwent 3D TVS pelvis as an investigation of choice in missing IUCD tails. All patients were decided for hysteroscopy with laparoscopic guidance for Cu-T removal and three were converted to laparotomy for failed attempted scopy removal due to complications. Analysing the risk factors associated with these perforations, IUD insertion in the first 0- 3 months of delivery and lactation posed a major risk factor for perforation.
Conclusion: A 3D TVS PELVIS served as a valuable tool as a first line cost effective investigation in missing IUCD. The post cesarean IUCD insertion can be delayed upto 6 months of delivery to reduce the risk of uterine perforation and impaction. Patient selection and time of insertion and patient education on self-palpation of IUCD thread is also important after IUCDs insertion. The management strategies included hysteroscopy, laparoscopy and laparotomy when attempted scopy removal fails.

Keywords: IUCD, perforated IUCD, Ppiucd

Introduction
As per WHO IUCDs are the second most commonly used family planning methods after female sterilization [4]. In INDIA IUCD'S are being distributed free of cost to the users through family welfare clinics since 1965 [5]. The intrauterine contraceptive device was first deviced by Dr. Richard Richter in 1909[1]. Since then the IUCD has been the effective way of contraception for women requiring adequate spacing between pregnancies with good patient compliance. According to a study by Anderson *et al.* [2] the perforation rates as 1.3per 1000 IUCDS placed. According to a study by Janina Kaislasuo *et al.* [3] in 2009, a population based study adds that the incidence rates were lower as 0.4/1000 insertions. The risk factors associated with such perforation were clinical incompetence, insertion of IUCD during lactation and a fixed or retroverted uterus [8].

Materials and Methods
This is a case series reported from a tertiary care institutional hospital in Chennai, India between December 2016 - December 2017. It includes 5 patients with impacted and migrated IUCDs who presented with varied symptoms to the family welfare outpatient department. All the patients underwent 3D TVS pelvis as their primary modality of investigation for confirmation of misplaced IUCD. Patient history, time and place of insertion of IUCD, follow up advice provided by the clinician, clinical presentation at diagnosis were analysed.

Results
The findings of the case series are illustrated in Table 1. The mean age of women at diagnosis

of misplaced IUCD was 27.6yrs. All patients had a history of pain subsequently after Cu-T insertion and pain persisted for 2 patients for two months. Among the 5 migrated IUCD's, post placental insertion constituted 40%, Cu-T insertion less than 6 weeks of delivery constituted 40% and one patient had Cu-T inserted one year after delivery. On comparison of the 5 cases as shown in table 1, only 1 patient was educated on self-palpation of IUCD thread during menstruation and the rest 4 were unaware of the same. All IUCD insertions were done by trained doctors and midwifes (2 Gynecologist and 3 midwives).Lactation posed a major contributing factor in Cu-T migration as all the patients were invariably lactating during Cu-T insertion. The incidence of IUCD migration seem to be increased in patients who underwent previous caesarean section as seen in this case series (4 out of 5 patients).Mean delay between insertion of IUCD and diagnosis of impacted IUCDs were 3.2years ranging from 1 year to 7 years post insertion. All patients underwent 3D TVS pelvis as a first line of investigation to diagnose a misplaced IUCD. In all the 5 cases 3D TVS pelvis (Fig.1) was able to accurately diagnose the position of the misplaced IUCD and correlated with the intraoperative findings and aided in deciding the mode of management. 4 patients were planned for hysteroscopy guided Cu-T removal and 3 were converted to laparotomy due to broad ligament hematoma in one patient and dense adhesions (Fig.2) in the other two patient. One patient was planned for laparoscopic removal as ultrasound showed Cu-T anterior to the uterus protruding through the fundus. One patient who had a broad ligament hematoma required two packed cell transfusion and required a day of ICU care while the other 4 patients were discharged after 24-48 hrs of observation. All patients had uneventful post-operative recovery and had no further complaints on follow up.

Discussion

IUCD has been considered as a long term reversible contraception for years and currently there are 180 million user worldwide [6, 7]. Midwives and gynecologists are given special training and are entitiled to Cu-T insertions after training programs conducted by the ministry of health and family welfare, Government of India. The incidence of uterine perforation by a study quotes incidence rates as low as 0.1/1000 insertions [9].

The perforation can occur in two ways: immediately during insertion, following a technical failure of installation or it can occur secondary to a partial myometrial perforation during installation. This primary perforation can cause pain and discomfort to the patients and hence such symptoms post IUCD insertions shouldn't be taken lightly. All our patients gave a history of pain subsequently after IUCD insertion and one patient continued to have pain for 2 months. This partially embedded IUCD can undergo Intramyometrial migration which is further accentuated by the uterine contractions during lactation. This poses a risk of migration and perforation for lactating women opting for IUCD. The embedded IUCD causes an inflammatory phenomena with subsequent uterine contractions which will allow the IUD to continue its migration. Secondary migration occurs into the Peritoneal cavity causing bowel and peritoneal adhesions (Fig 3) producing pain as seen in 3 out of our 5 patients who had impacted and migrated IUCD.

IUDs migrate into the peritoneal cavity (omentum, broad ligament, retropubic space) and can also migrate within an organ (ovary, proboscis, rectum, sigmoid colon, appendix, bladder), or exceptionally intravascular (stenosis of the iliac vein), sometimes in the subcutaneous fat [10]. According to Cochrane review and studies [11, 12] there is a high acceptance rate in the immediate postpartum period of 39% and hence favoring the Post placental of the PPIUCD however the limitations were that the patients were followed up only to 6 months post IUCD insertion and 22% of the patients did not turn up at the 6 week follow up. Hence adequate education on self-palpation of detection of missing IUCD tails and regular follow up is essential in a low resource setting. As seen in this case series 4 out of 5 patients were not given education on IUCD follow up and were diagnosed with perforated IUCD after a mean of 3.2 yrs. The recommended follow up schedule as advised by the Ministry of Healthy and Family welfare post IUCD insertion[13] is first visit after one month, preferably after next menstrual period. Subsequent visits after 3 months and 6 months followed by home visits by ANMs and Midwives. This follow up needs to be continued for atleast a period of 3 yrs with twice yearly visits as suggested by this case series analysis. During every visit the below said warning sings need to be looked for

The warning signs (PAINS) [13]

P: Period related problems or pregnancy symptoms
A: Abdominal pain or pain during intercourse
I: Infections or unusual vaginal discharge
N: Not feeling well, fever, chills
S: String problems

Although the postplacental insertion of IUCD has high acceptance rate which outweighs the expulsion rates, the safety of postcesarean postplacental IUCD insertion is questioned for its risk of uterine impaction, perforation and migration. A study by Caliskan *et al.* [14] that perforations occurred in patients who had IUCD inserted between 0-3 month of delivery and safe after 6 months of delivery. As lactational amenorrhoea is likely to provide contraceptive efficacy in women post-delivery the IUCD insertion in post cesarean section patients can be delayed upto 3-6 months.

Conclusion

IUCD insertion as post placental in previous cesarean section and lactating patients served as risk factors associated for perforation of IUCDs.

Missing IUCD tails in patients attending the Family welfare outpatient department need to be investigated with a 3D TVS pelvis as a first line investigation modality which is cost effective.

Hysteroscopy, laparoscopy and laparotomy in failed scopy removal is used in management of misplaced and migrated IUCDs.

Fig 1: A 3D TVS pelvis image of a patient with IUCD embedded anterior to the uterus near bladder serosa 1B 3D TVS pelvis image showing empty uterine cavity 1C 2D ultrasound image of the same patient with misplaced IUCD.

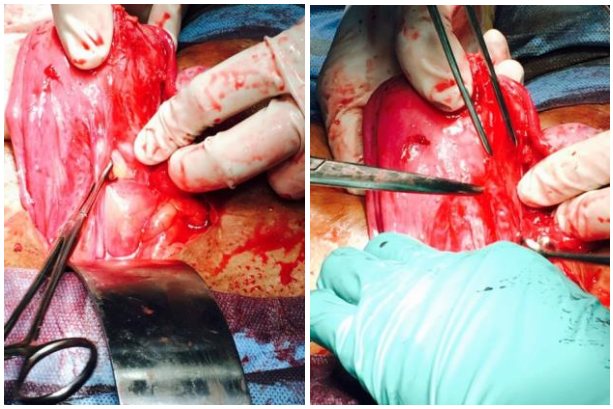

Fig 2A 2B: intraoperative images of a patient who underwent laparotomy due to dense ashesions. IUCD seen perforated and embedded in the anterior wall.

Fig 3: Arrow showing IUCD seen embedded in the cornua with omental adhesions.

Table 1: The findings of the case series

	Case 1	Case 2	Case 3	Case 4	Case 5
Age	28	35	28	21	**26**
Parity	2	1	1	1	1
Type of IUCD	Cu-T 380A	Cu-T 375	Cu-T380 A	Cu-t 380a	Cu-T380A
Antecedents	Caesarean	Caesarean	Normal Delivery and conceived with Cu-T	Caesarean	Caesarean
Time of insertion	Post placental	One year after delivery	4 weeks after delivery	Post placental	6 weeks after caesarean
Lactating	Yes	Yes	Yes	Yes	Yes
Circumstance discovered	Approached for lap ST	Pain with Irregular cycles And thread not felt	D and C done outside And failed removal	Pain abdomen	Pain abdomen
TVS pelvis	IUD inside the uetrus	IUD noted inside the ueterus	Anterior to the uterus	Iud intrauterine	Cu-t in anterior myometrium
Delay between insertion of IUCD and diagnosis	3years	7years	2years	3years	1 year
Therapeutic measures	Laparotomy	Hysteroscopy	Laparotomy	Laparotomy	Laparoscopy
Location of IUCD	Right broad ligament	Partially impacted to Left cornua	Anterior to uterus near the left cornua	Anterior wall of uterus	Protruding through uterine fundus
Adhesions	Nil	Nil	Bowel Adhesions	Uterus twisted and adherent	Nil
Remarks	Attempted removal via hysteroscopy failed with the formation of a broad ligament hematoma of 5*5cm which was concurrently visualized on laparoscopy.Procedure was converted to laparotomy, leaves of broad ligament opened and hematoma evacuvated, the horizontal limb of the Cu-T was seen in the right broad ligament and same successfully removed in toto.	On hysteroscopy the IUCD was seen impacted in the left cornua of the uterus with the horizontal limb buried and vertical limb visible and successfully removed under hysteroscopic vision	On laparoscopy, Cu-T was not visualized however fimbriae, large bowel loops were adherent to the left cornua.Procedure was converted to laparotomy and bowel adhsions removed and Cu-T was seen buried beneath the bowel adhesions and same removed successfully.	Laparoscopy done showed uterus pulled up and seen rotated by 180 degree with dense adhesions of the right lateral wall of the uterus to the anterior abdominal wall.procedure converted to laparotomy and adhesiolysis done,uterus was untwisted and cu-t impacted in the anterior wall of the uterus was removed.	laparoscopy done showed Cu-T protruding through the uterine serosal layers at the fundus. No adhesions noted and Cu-T removed under laparoscopic guidance with 10mm claw.

References

1. Richter R. Ein mittel zurVerh¨utung derKonzeption, Deutsche Medizinische Wochenschrift. 1909; 85:1525-1527,

2. Andersson K, Ryde-Blomqvist E, Lindell K, Odlind V, Milsom I. Perforations with intrauterine devices. Report from a Swedish survey Contraception. 1998; 57(4):251-255
3. Janina Kaislasuo, Satu Suhonen, Mika Gissler, Pekka Lähteenmäki, Oskari Heikinheimo. Intrauterine contraception: incidence and factors associated with uterine perforation-a population-based study, Human Reproduction, 1 September. 2012; 27(9):2658-2663, https://doi.org/10.1093/humrep/des246
4. WHO. Intrauterine devices: Their Role in Family Planning Care. Geneva: WHO. 1983a; 75:53.
5. ICMR. Improved utilization of intrauterine devices. New Delhi: ICMR, 1989.
6. Davis HJ. Intrauterine Devices for Contraception; The IUD, Williams &Wilkins Company, Baltimore, Md, USA, 1971.
7. Speroff L, Darney PD. A Clinical Guide for Contraception, Lippincott Williams &Wilkins, Philadelphia, Pa, USA, 2010.
8. Kaislasuo J, Suhonen S, Gissler M, L ahteenm aki P, Heikinheimo O. "Uterine perforation caused by intrauterine devices: clinical course and treatment, Human Reproduction. 2013; 28(6):1546-1551,
9. Bennis H *et al*. Migration transutérine des dispositifs intra-utérins. Rev Med Liège. 2011; 66(3):153-8.
10. Intra-uterine device's migration (DIU) with subsequent pelvic peritonitis in a 64 years old patient. Imagerie de la Femme. 2009; 19(1):56-8.
11. Grimes D, Schulz K, Van Vliet H, Stanwood N. Immediate post-partum insertion of intrauterine devices. The Cochrane Database of Systematic Reviews. 2003, 1. Art. No.: CD003036. DOI: 10.1002/14651858.CD003036
12. Celen S, Mo¨ro¨y P, Sucak A, Aktulay A, Danis man N. Clinical outcomes of early postplacental insertion of intrauterine contraceptive devices. Contraception. 2004; 69:279-82.
13. http://www.nrhmtn.gov.in/modules/IUCD_Reference_Manual_for_MOs_and_Nursing_Personne_-Final-Sept_2013.pdf
14. Caliskan E, ztürk NÖ, Dilbaz BÖ, Dilbaz S. Analysis of risk factors associated with uterine perforation by intrauterine devices. European Journal Contraception and Reproductive Health Care. 2003; 8:150-5.