Misplaced IUCD: Challenges and Management

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ABSTRACT

PPIUCD programme was started in March 2011 in Kumaon region as a highly effective, non-hormonal method of contraception that can be safely used by all women regardless of breastfeeding status during this interval.There were 4481 postpartum cu-T inserted in entire Kumaon region since the programme started. This in turn has come with an increase in the number of related problems like misplaced Cu-T. The case series of 36 cases with lost strings of IUCD reported during October 2013 to January 2016 is presented herein, wherein the routine procedure of IUCD retrieval failed and were referred to our hospital for further management. 30 patients had cu-T in uterine cavity, which were successfully removed by hysteroscopy in 22 cases. It was found in pelvic cavity in 2 cases, subsequently removed by laparoscopy. Out of 36 patients, IUCD was inserted following vaginal delivery in 11 patients. 20 were previous 1LSCS, 3 were previous 2LSCS and 2 patients with Cu-T in pelvic cavity had interval Cu-T insertion. Hysteroscopy is the preferred method in management of misplaced IUCD.

KEY WORDS: hysteroscopy, laparoscopy, misplaced cu-T, PPIUCD programme.

INTRODUCTION:

Among the options available, the multi-year cost of the Copper T380A IUD makes it one of the most cost-effective contraceptive options available. According to the World Health Organization Medical Eligibility Criteria, an IUCD can be inserted in the 48 hours postpartum, referred to here as a postpartum IUCD (PPIUCD), or after four weeks following a birth.With increased use of intra-uterine devices (IUDs) for contraception, an increase in the number of related problems are reported. A frequent clinical problem is the loss of filament at the external cervical os, the 'lost tail'. The disappearance of the string or marker heralds potential problems such as retracted or torn off tail, misplacement within the cavity, intra-mural penetration or extra-uterine location. IUDs may be misplaced in as many as 5% of cases. Procedures for retrieval of a misplaced device includeextraction with a metal hook, artery forceps, thread retriever or dilatation and curettage. However, success is not ensured with above methods; failure and uterine trauma may occur. Hysteroscopy as a diagnostic and operative technique has enabled safe retrieval of misplaced IUDs. The study was planned to analyze the etiology and management of cases with misplaced or translocated intrauterine devices (IUDs) into the abdomen or into the wall of the uterus.

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MATERIALS AND METHODS:

This study was a retrospective analysis of patients records at Dr. Susheela Tiwari Hospital, Haldwani during the period October 2013–January 2016,which required an admission to the hospital for the removal of an IUD that had misplaced within the cavity or had translocated to the outside of the uterus.We present 36 cases with 'lost IUDs' in whom the routine procedure of IUCD retrieval failed and were referred to our hospital for further management. A proforma was designed containing information regarding patient's age, parity, mode and time of insertion, time duration of IUCD, mode of IUCD retrieval and its location. The collected data was analysed and compared with other studies. Presence of anIUD was confirmed either by ultrasound or X-ray.A 10 mm operative hysteroscope with grasping forceps was used for extraction of the IUD under Total Intravenous Anesthesia (TIVA).

All women whose IUC string could not be visualized at the external os of the cervix at any given

follow-up visit, even after attempting a standard maneuver of sweeping the strings from the cervical canal or trying to visualize the strings in the cervical canal using colposcopy were included in the study. All women who had voluntarily gone for IUCD removal or have seen IUD expelled out spontaneously were excluded from the study.

RESULTS:

Mean age of the patients varied from 20-40 years with maximum duration of use between 1- 2 years. Maximum cases were seen between 3-4 parity. One case of nulliparous women with history of infertility with IUCD insertion (Cu- T 380-A) inserted at peripheral hospital by an auxiliary nurse midwife on day-5 was identified. Out of 36 patients, (a) IUCD was inserted following vaginal delivery in 10 patients, (b) 20 were previous 1 LSCS, (c) 3 were previous 2 LSCS and (d) 3 patients with cu-T in pelvic cavity had interval cu-T insertion.

Maximum number of patients had time interval of 18-24 months between insertion and removal of cu-T. After confirmation of the diagnosis, out of 36 women, it was found to have expelled completely in 4 patient and it was found in cervical canal in 7 patients. IUCD was found embedded in the myometrium . In 22 women, while it was found in pelvic cavity in 3 patients.

IUCD in cervical canal was removed with the help of long artery forceps. IUCD found embedded in the myometrium was removed with the help of hysteroscope, while that in pelvic cavity was successfully removed by laparoscopy. In one patient, IUD was translocated outside the uterine cavity embedded into the omentum just behind the uterus, while it was found on the surface of the bladder in 2nd Case. In both cases, no IUD was visible on hysteroscopy despite the X-ray abdomen erect view showing IUCD in peritoneal cavity. Laparoscopy failed to visualize cu-T in one nulliparous case with cu-T in pelvic cavity. Laparotomy was done and cu-T was found bridging the two loops of large intestine. Removal of cu-T with primary repair of colonic perforation was done.

Table 1: Age of patients.

Age (year)	Number	Percentage
20-30	9	25
31-40	20	55
>40	7	20

Table 2: Parity of patients.

Parity	Number	Percentage
Nulliparous	1	2
1-2	10	28
3-4	19	53
>4	6	17

Table 3: Mode and time of insertion.

Mode and time of insertion	No. patient	Percentage
After vaginal delivery	10	28
After 1st LSCS	20	55
After 2nd LSCS	3	9
Interval IUCD insertion	3	8

Table 4: Time interval between time of insertion and removal of Cu-T.

Time interval between time of insertion and removal	No. patient	Percentage
<6 months	2	5
6-12 months	5	14
12-18 months	9	25
18-24 months	14	39
>24 months	6	17

Table 5: Location of Cu-T device.

Location of device	No. patient	Percentage
1) Intra-uterine	29	81
(a) Partially embedded in the cavity	22	61
(b) In the cervical canal	7	20
2) Extra -uterine	3	9

Table 6: Method of removal.

Removal	No. of patients	Percentage
With artery forcep	7	20
Hysteroscopic removal	22	61
Laparoscopic removal	2	6
Laparotomy	1	2

Table 7: Position and characteristics of IUDs on hysteroscopy.

Hysteroscopic findings	No. of Patients
Cu T in normal position	14
Cu T lying transversely	2
Transverse limb of Cu T in anteroposterior diameter	2
Submucosal Fibroid below Cu T	4
IUD not visualized	2

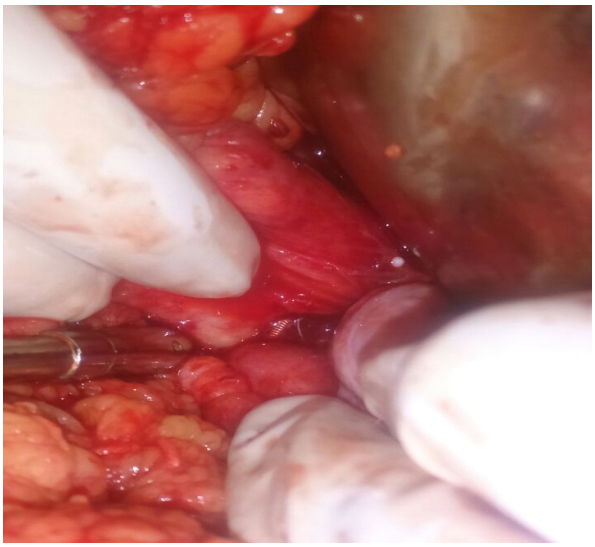

Figure 1: Cu-T bridging two large bowel loops in case of nulliparous woman removed by laparotomy.

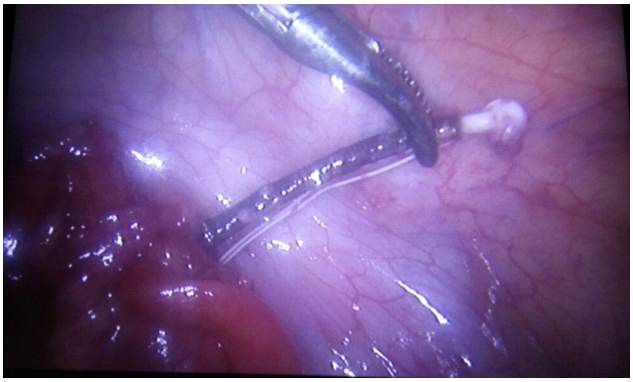

Figure 2: Cu-T outside the uterine cavity embedded in the omentum , removed laparoscopically.

DISCUSSION:

Intrauterine device is a widely used reversible method of Contraception, preferred due to long duration of birth control effect and ease of use. However it also has some serious complications such as perforation of the uterus and its migration to the abdominopelvic structures[1]. Primary perforation may occur during insertion by mechanical forces. Some of the known risk factors for IUD perforation are inadequate training of family planning providers, insertion at early puerperal period when uterus is soft and bulky, past history of perforation (formation of a new canal with previous inappropriate insertion), and anatomically highly (ante or retro) flexed uterus.

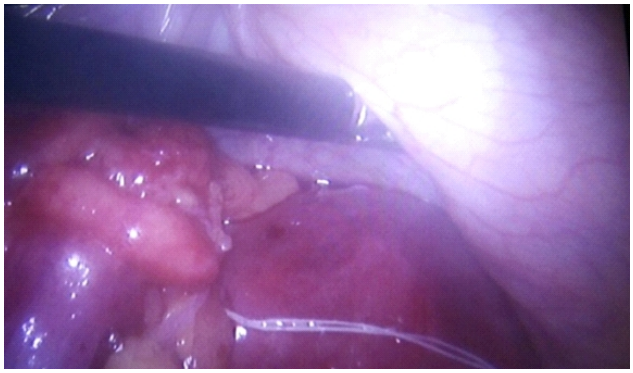

Figure3: Cu-T outside the uterine cavity embedded in the omentum , removed laparoscopically

Most of the patients were > 30 years and were grand multipara with maximum incidence following previous1LSCS.These findings are consistent with other studies [7,8]. IUCD was in the uterine cavity in 29(81%) patients. Seven (20 %) patients among those needed long artery forcep. IUCDs were adherent to uterine wall in 22 (61%) patients requiring hysteroscopic guided removal. According to Barsaul M[9] and Lawal[7], 79.79% and 63.48% patients respectively had their device inside the uterine cavity. In a study by Trivedi SS et al [10] on 38 patients with intra-uterine devices with lost strings, hysteroscopic aid was required after routine retrieval procedures failed. Thirty five intra-uterine devices could be removed easily with hysteroscope. Laparotomy was required in only one patient, for an extra-uterine Copper-T. In one series of 324 cases with misplaced IUCD one[9] in: 258 (79.93%) cases Copper-T was found in the uterine cavity and in 47 cases (14.51%) it was removed from cervical canal. In only 18 cases (5.56%), it was translocated. The incidence of uterine perforation is very low, but in the literature nearly 100 cases are reported about the extra uterine localization of IUCD.

Three patients (8%) had complete uterine perforation and transmigration to peritoneal cavity. Successful laparascopic removal was don in 02(66.6%) patients, while in the third patient, a nulliparous woman having history of Cu-T 380A insertion at peripheral hospital by an auxiliary nurse

midwife on day-5, the device was found perforating the large bowel. It was removed followed by gut repair. These findings show an increase rate of transperitoneal migration of IUCDs in this study, which reflects an improper training of medical personnel involved in the insertion of IUCD. Elahi N[8]reported 28.57 % cases, while Barsaul M et al[9] reported only 5.56 % cases of IUCD migration to peritoneal cavity.

The symptoms of an IUD perforation are diverse varyingfrom a subsequent unwanted pregnancy[2] to irritant lower urinary tract symptoms[3], chronic pelvic pain, peritonitis, and fistulae or abscess formation depending on the organ of penetration and the interval since penetration and patient's response. Ultrasonography and plain X-ray are diagnostic for echogenic and radio opaque foreign body, respectively.

World Health Organization has recommended removal of a dislocated IUD as soon as possible irrespective of their type and location[4]. It is advised to retrieve a migrated IUD by minimally invasive techniques[5]. Endoscopic techniques such as colonoscopy, hysteroscopy, and cystoscopy can be used for diagnosis and treatment depending on the location of IUD.

A review of surgical techniques to remove IUD revealed that 93% of the reported cases in literature attempted laparoscopically, but cases of both abdominal and pelvic organ perforations have the laparotomy rate of 57.1%[6]. Valle and Freeman1 advocated hysteroscopy as a primary method for locating and removing IUDs with missing tails in order to avoid unnecessary X-ray exposure and injuries by blind exploration.

CONCLUSION:

Awareness of people about this safe, valuable and reversible method of contraception, its easy availability and the provision of trained personnel for its insertion as well as a regular follow up is needed in developing countries.

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