

Misplaced Intrauterine Device (IUD): The Endoscopic Management

¹Krishna Dahiya, ²Nirmala Duhan, ²Smiti Nanda, ³Pinkey Lakra

¹Associate Professor, Department of Obstetrics and Gynecology, Pt. BD Sharma Postgraduate Institute of Medical Sciences Rohtak, Haryana, India

²Professor, Department of Obstetrics and Gynecology, Pt. BD Sharma Postgraduate Institute of Medical Sciences, Rohtak Haryana, India

³Resident, Department of Obstetrics and Gynecology, Pt. BD Sharma Postgraduate Institute of Medical Sciences, Rohtak Haryana, India

Correspondence: Krishna Dahiya, Associate Professor, Department of Obstetrics and Gynecology, Pt. BD Sharma Postgraduate Institute of Medical Sciences, 74-R, Model Town, Rohtak-124001, Haryana, India, Phone: 01262211888, e-mail: krishnadahiya@rediffmail.com

Abstract

CuT is widely accepted contraceptive method because of its safety, economy, efficiency and reversibility. This is a retrospective analysis of 30 patients with misplaced IUD's. In 21 patients device was found to be intrauterine and removed hysteroscopically and in 9 patients device was found extrauterine, retrieved laparoscopically in 77.7% cases while 22.2% patients required laparotomy. Endoscopic procedure should be considered as first line attempt to removal of misplaced intrauterine or extrauterine device.

Keywords: Intrauterine contraceptive device, misplaced, endoscopy, IUD (Intrauterine device).

INTRODUCTION

Intrauterine contraceptive device is the main stay of contraception especially in developing countries, despite side effects and complications like menstrual bleeding, pelvic pain, infection and uterine perforation. Uterine perforation is a rare but serious complication. The reported incidence of perforation varies considerably from 1 in 350 to 1 in 2500.^{1,2}

Once a patient comes with missing threads of IUD, the device is located by X-ray or ultrasound. Currently endoscopy has emerged as a preferred method. Use of hysteroscopy to remove a misplaced device helps in avoiding blind manipulations, which may cause hemorrhage, perforation and sometimes visceral injury.³⁻⁵ On the other hand, a complete removal is ensured in old fragmented and embedded devices without any associated complications.^{4,6} Similarly, extrauterine devices can be removed laparoscopically easily.

MATERIAL AND METHODS

The study includes 30 patients reported to obstetrics and Gynecology OPD of PGIMS Rohtak with misplaced CuT during last 4 years. In all the patients a gynecological examination, ultrasound evaluation and an X-ray AP view abdomen and pelvis was done to locate the misplaced IUD. If the device was found to be intrauterine, hysteroscopy was done to locate and retrieve device. In those patients in whom the IUD was confirmed to be extrauterine diagnostic laparoscopy was done. In patients in whom laparoscopic removal was not possible or was difficult, laparotomy was done in the same sitting.

RESULTS

Maximum number of patients was between 20-30 years of age (86.6%). Majority of patients were primipara (53.3%) and 46.6%

were multipara. As far as timing of insertion is concerned, 6 (20%) were postpartum, 8 (26.6%) were postabortal and 16 (53.3%) were postmenstrual. Twenty three (76.6%) IUD's were inserted at primary health center, 7 (23.4%) were inserted at civil hospital and none were inserted at tertiary center. Time interval between insertion and removal is depicted in Table 1.

Of the 21 misplaced intrauterine devices 10 were found partially embedded in uterine wall and 6 of the misplaced IUD's were found deeply embedded in the uterine cavity. In four patients the device was fragmented after history of partial removal outside (Table 2). After their location they were removed hysteroscopically. One patient reported with 8 weeks pregnancy and misplaced IUD. The device was confirmed to be intrauterine on transvaginal sonography. She decided to continue the pregnancy and had uneventful antenatal course. She had full term normal delivery and IUD was removed after 6 weeks hysteroscopically.

Nine patients had extrauterine migration of the IUD as diagnosed by USG and abdominopelvic X-ray. Out of 9, successful laparoscopic removal was possible in 7 (77.7%) patients and 2 patients required laparotomy for the removal although their localization was done with laparoscopy.

Table 1: Time interval between insertion and removal

Time interval between insertion and removal	Number	Percentage
< 6 months	1	3.3
6-12 months	5	16.6
12-18 months	6	20
18 months-2 years	12	40
> 2 years	6	20

Table 2: Location of misplaced IUCD

Location of device	Number	Percentage
1. Intrauterine	21	70
Partially embedded in Myometrium	6	20%
Deeply embedded	10	33.3%
Fragmented	4	13.3%
2. Extrauterine	9	30
Lateral pelvic mass	1	3.3
Adherent to appendix	1	3.3
Omentum	3	10
Embedded in serosa of uterus	1	3.3
Pouch of douglous	2	6.6
Adherent to gut	1	3.3

One patient had a small transverse limb of the CuT embedded in the serosa of the posterior wall of the uterus, which was in turn covered with omentum and left fallopian tube (Fig. 1). Adhesiolysis was done and then transverse limb was removed with graspers. This patient had history of incomplete removal of IUD at primary health center.

In 2nd patients the CuT was lying in pouch of douglous and a few flimsy adhesions were present (Fig. 2). The CuT could be removed easily laparoscopically. In 3 patients CuT were adherent to omentum and in 2 cases could be removed laparoscopically while one case required laparotomy. In 1 patient the IUD was adherent on the lateral pelvic wall and same could be removed laparoscopically. In 1 patient IUD was adherent to appendix and on removing the device, there was bleeding from appendix. Appendisectomy was done in same sitting. Another patient required laparotomy for removal as IUD was embedded in small gut. The IUD retrieved were all copper containing. There was no major postoperative complication and all the patients were discharged after 1 to 5 days of the procedure.

DISCUSSION

IUD is a safe, effective and reversible mode of long-term contraception but may be associated with certain morbid

complications like uterine perforation. The perforation is thought to occur at the time of insertion or due to chronic inflammatory reaction to copper containing foreign object leading to gradual erosion through uterine wall. Hysteroscopy retrieval of misplaced IUD has been successfully carried by several workers.^{6,7} Hysteroscopy was successfully done in 21 cases of misplaced intrauterine devices in present series. The risk factors presumed important for translocation are skill of the inserter, the technique of insertion, status and configuration of the uterus. In the present study 76% of the insertions of the IUD's were done at PHC level by health workers and none were done at tertiary center suggesting skills and technique as an important factor. The most common symptoms of displaced IUD include abdominal pain and menorrhagia, but asymptomatic patients with silent perforations have been reported. Serious complications associated with displaced IUD's include bowel obstruction, bowel perforation, mesentery perforation, rectal stricture and rectovaginal fistula.⁸

The management of extrauterine displaced IUD's still remains controversial and no consensus opinion exists. Most of the literature suggests that all the translocated IUD's should be removed electively as complications like adhesions and bowel obstruction have been reported and removal should be done as soon as the diagnosis is made. WHO also recommends the removal of misplaced IUD because of potential damage to adjacent organs and because of medicolegal problems.⁸ Adoni and Benchetrit found no adhesions in 3 and 11 cases of misplaced IUD's respectively. They suggested that surgery should be done in symptomatic patients while asymptomatic patients may benefit from conservative management.^{9,10}

The acceptable treatment of uterine perforation is surgical removal either by laparoscopy or exploratory laparotomy. In the present study laparoscopic removal was possible are 7 of 9 cases of translocated IUD's. In two of the cases due to adhesions laparotomy was required.

The present study suggests that hysteroscopy and laparoscopy are invaluable in management of misplaced IUD

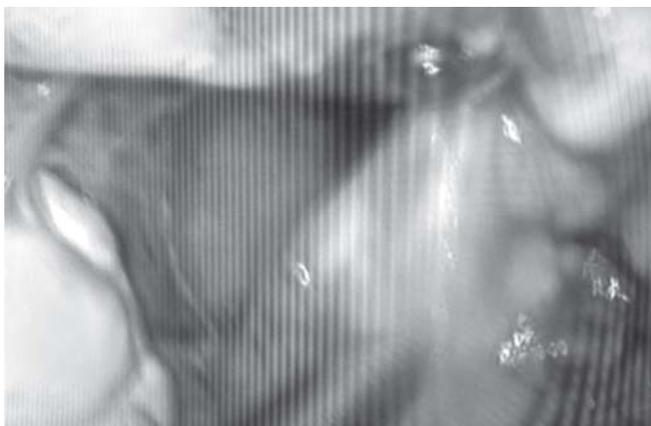


Fig. 1: Laparoscopic photograph showing CuT embedded in serosa of uterus covered with adhesions

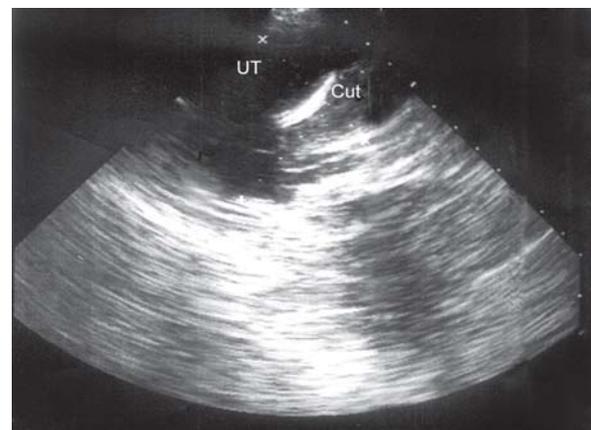


Fig. 2: Ultrasonography showing CuT

when simple maneuvers fail to locate and retrieve it. Exploratory laparotomy was needed only when the device could not be removed laparoscopically due to its location, adhesions or contraindications of laparoscopy. Endoscopy is associated with comfort, minimal hospital stay and early recovery and hence it is recommended as the preferred method for removal of misplaced IUD's.

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