

Postplacental Intrauterine Contraceptive Device Transmigration – Rare but the Real Concern for Service Providers

Abstract

Uterine perforation following postplacental intrauterine contraceptive device (PPIUCD) insertion is a rare event with a potential for serious injuries. In the present case, a young lady with a history of PPIUCD insertion presented with a mass having ill-defined margins and restricted mobility palpable in her right iliac region. Examination reported a conglomerated mass in right adnexa with an IUCD surrounded by a heterogeneous inflammatory collection to which omentum and bowel loops adherent to it. Additional imaging reported involvement of right iliac vessels and right ureter with upstream hydronephrosis. Intraoperatively, ureter was found intact and away from the IUCD which was removed with a gentle pull, and a rent in the right posterolateral surface of uterus was repaired with delayed absorbable sutures. With PPIUCD services being provided on an unprecedented scale, it becomes prudent and ethically crucial to create a national repository to document post insertion outcomes and complications. Case report aims to inform and sensitize stakeholders about possible post insertion complications to help improve expansion of the PPIUCD programs.

Keywords: Intrauterine device, postplacental intrauterine contraceptive device, uterine perforation

Introduction

Uterine perforation following postplacental intrauterine contraceptive device (PPIUCD) insertion is a rare event with a potential for serious injuries to surrounding organs.^[1,2] Meticulous attention to standard checklist and correct insertion techniques are essential to avert this catastrophic complication.^[3] The present paper documents a pelvic mass with unilateral hydronephrosis following IUCD transmigration, 18 months after the insertion, and its subsequent operative removal.

Case Report

A 21-year-old primiparous woman reported a palpable mass per abdomen in the right lower quadrant, associated with gradually increasing dull aching pain which intensified on applying pressure for 3 months. She had a history of PPIUCD insertion at a primary health center 18 months prior following an uncomplicated vaginal delivery. On examination, a mass of 15 cm × 10 cm with ill-defined margins and restricted mobility was palpable in the right iliac region. Slight tenderness was apparent. An IUCD thread

was not visible on speculum examination vaginally. Ultrasound examination reported a conglomerated mass in right adnexa with an IUCD surrounded by a heterogeneous inflammatory collection to which omentum and bowel loops were adherent. Contrast-enhanced computed tomography additionally reported involvement of right iliac vessels and right ureter with upstream hydronephrosis. Right external iliac artery was encased within this ill-defined mass and was noted to be focally abutting the IUCD 3.3 cm distal to origin of the right external iliac artery [Figure 1].

Intraoperatively, abutting right posterolateral aspect of uterus and the posterior leaf of broad ligament on the corresponding side, a conglomerated mass was seen with a loop of sigmoid colon adhered to it. IUCD thread was noted coming out medial to colon attachment [Figure 2]. Consistent with the imaging, the IUCD was seen perforating the right posterolateral wall of uterus and was found incarcerated within the broad ligament with involvement of ipsilateral ureter. Retroperitoneum was opened and the course of right ureter was delineated starting from bifurcation of common iliac artery to its entry into the

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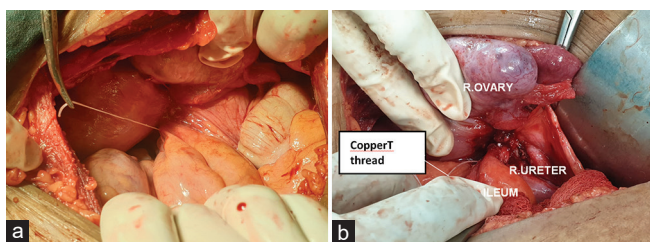


Figure 1: (a) Laparotomy image showing right posterolateral wall of the uterus perforation with intrauterine contraceptive device thread seen coming out. (b) Relationship of the ureter and ileum

incarcerated mass. However, on further dissection, ureter was noted to be intact and away from the horizontal limb of IUCD, which became clearly visible upon separation of intestinal loop. IUCD was removed with a gentle pull, and a rent of 1 cm × 0.5 cm on the right posterolateral surface of uterus was repaired with delayed absorbable sutures. Intestinal integrity was deemed intact barring 3-mm serosal erosion which was left to heal spontaneously.

Perioperative period was uneventful and the patient was offered an alternative method of contraception at discharge.

Discussion

India has been the global pioneer in introducing landmark public policies to influence population variables for the past 70 years. The National Family Planning Program, first launched in 1956, has been scaled up massively over the decades with auxiliary support of various other programs focusing on indirect parallel measures. This includes the introduction of PPIUCD in the National Program (2009–2010).

Introduction of the newer IUCDs such as Copper 380A, Multiload 375, and LNG-IUD led to widespread acceptance of IUDs an effective contraceptive option with failure rates as low as 0.1–0.2/HWY and constituted 13.7% of all contraceptive use worldwide,^[4] under the National Program for Family Planning.^[5] Copper T 380A is offered free of cost to the beneficiary, with renewed emphasis on insertion in postpartum period within the first 48 h of delivery. The program has seen good beneficiary acceptance and satisfaction, with acceptable postinsertion expulsion rates.

Several studies on large group of participants have proved that PPIUCD is effective with fewer complications.^[6,7] Perforation following PPIUCD insertion is rare. Literature reports severe complications such as anterior uterine perforation with migration into bladder^[8] as well as posterior perforations into culdesac requiring surgical intervention.^[9] In our case, PPIUCD had perforated the right posterolateral wall of the uterus and forming a conglomerated mass involving the right iliac vessel, right ureter, ilius loop of bowel.

PPIUCD insertion, distinct from interval IUCD insertion requires dedicated logistics support like special PPIUCD

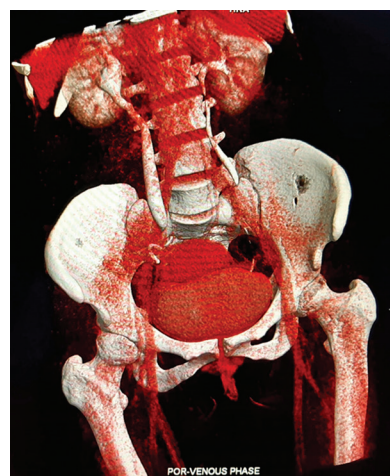


Figure 2: Computed tomography scan three-dimensional reconstruction image of abdomen and pelvis region showing posteriorly displaced intrauterine contraceptive device and dilated right ureter

forceps and training mannequins.^[4] Immediate postpartum uterine cavity is long. The upper segment flops over the lower uterine segment and the provider must be seasoned to identify and negotiate these angulations to ensure fundal placement of IUCD. Failing to affirm the standard technique using standard instruments^[10] leads to the common error of mistaking posterior wall of uterus as fundus and therefore incorrect placement of PPIUCD. This misplaced IUCD may get expelled, which is commoner rarely may gradually bury through the soft and stretched out tissue of the lower uterine segment causing uterine perforation.^[6] Postpartum IUCD has to be inserted by specially trained providers in the institutional deliveries.

Follow-up care of the PPIUCD acceptor is equally essential to ensure content with contraceptive choice and willingness to continue the same. Provision of a dedicated follow-up card at discharge detailing relevant instructions helps reinforce recognition of key messages with respect to PPIUCD care and follow-up. Coinciding with the first newborn visit as per the National Immunization Schedule at 6 weeks, the woman should be advised to come for a checkup at 6 weeks and thereafter as and when necessary. Telephonic follow-up should be undertaken if the woman lives far off.

Conclusion

With PPIUCD services being provided on an unprecedented scale in India, it becomes prudent and ethically crucial to create a national repository to document post insertion outcomes and complications. Case report aims to inform and sensitize stakeholders about possible postinsertion complications to help improve expansion of the PPIUCD program in India.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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