ECRONICON OPEN ACCESS

GYNAECOLOGY
Case Report

The Unbelievable Case of Primary Placement of IUCD in Urinary Bladder

AG Radhika*, Sonia Chawla, Seema Prakash, Rachna Aggarwal and Gita Radhakrishnan

Department of Obstetrics and Gynaecology, University College of Medical Sciences and Guru TegBahadur Hospital, India

***Corresponding Author:** AG Radhika, Department of Obstetrics and Gynaecology, University College of Medical Sciences and Guru Teg-Bahadur Hospital, Delhi, India.

Received: July 30, 2015; **Published:** August 18, 2015

Abstract

Intrauterine contraceptive device (IUCD) is one of the most popular temporary methods of contraception used worldwide. The advantages of IUCD use are its high efficacy, easy reversibility, maintains privacy and its use is independent of sexual activity. Insertion of IUCD in health centers in India is done by skilled health workers or doctors. Uterine perforation and migration are rare but known complications of IUCD insertion. Here we present an unusual case of primary misplacement of IUCD into urinary bladder.

Mrs X, a 31 year old multiparous lady and an IUCD user for last 10 years, visited primary health centre for getting the earlier device replaced. The removal followed by replacement was carried out by a trained nurse. At insertion, the client felt severe abdominal pain and dizziness which was followed by hematuria for about five days. This prompted her to seek advice at our centre. On examination, there was mild tenderness in lower abdomen and IUCD thread was missing. X-ray showed the presence of IUCD in pelvis and USG confirmed the location of device in bladder. The IUCD was subsequently removed through cystoscopy. Migration of IUCD following uterine perforation into the bladder, pelvis, abdominal cavity, and large gut has been commonly reported but primary placement into the bladder is very unusual.

The aim of present case report is to highlight the importance of training the staff involved in such large scale health programmes since even a single complication could be a reason to demotivate many others.

Keywords: *Intrauterine contraceptive device; intra-vesical insertion; primary health centre; primary placement in bladder*

Abbreviations: IUCD: intrauterine contraceptive device; USG: ultrasonography; TVS: Trans-vaginal sonography; PID: pelvic inflammatory disease

Introduction

IUCD (Intrauterine Contraceptive Device) is a commonly used method of contraception globally. Reports estimate to more than 100 million women or at least 23% women worldwide to be using IUCD [1-3]. A variety of complications like excessive or irregular bleeding, perforation and or displacement and pelvic inflammatory disease have been reported in literature following IUCD insertion. Perforation is known to more often occur at time of insertion and incidence has been reported from 0.2 to 9.6 per 1000 [4,5]. However direct placement of IUCD into urinary bladder is even rarer as has happened in the present case

Case Report

Ms X, 31 year old P3L3, presented to Gynecology casualty of Guru TegBahadur hospital, Delhi with complaints of pain lower abdomen, increased frequency of urination and dysuria for past one week. She had an IUCD inserted one week back at primary health centre by a trained nurse. The insertion of IUCD (Multi-load device) was following the removal of the older one which had been inserted 10 years ago. At the time of insertion, she felt severe pain in the lower abdomen as well as in vagina. The pain was so excruciating that she experienced

cold sweats and felt faint. This was unlike her earlier experience at insertion of the IUCD. She was reassured and prescribed some analgesics which gave her some relief. She noticed blood stained urine for the next at least 4-5 days but attributed it to uterine bleeding. There was no history of fever or abnormal discharge, her bowel habits were normal. She had sought treatment from a local doctor who again advised analgesics and bed rest. She was then referred due to persistence of symptoms.

Her children were delivered normally; the youngest child was 12 years old. She had opted to use Copper T 380A for contraception 2 years after her last child birth. In the present instance, Multiload375 had been inserted. At admission, her vitals were stable. Abdominal examination revealed slight tenderness in suprapubic region, there was no guarding or rigidity and bowel sounds were present. Speculum inspection revealed cervix and vagina to be normal though IUCD thread was not visualized. On vaginal examination, the uterus was acutely retroverted, multiparous sized, mobile and non-tender, fornices were free. Plain X-ray of the abdomen confirmed the presence of IUCD in the pelvis (Image 1). Transabdominal and transvaginal ultrasound were done which showed an empty uterine cavity and a linear echogenic structure in urinary bladder suggestive of IUCD (Image 2).

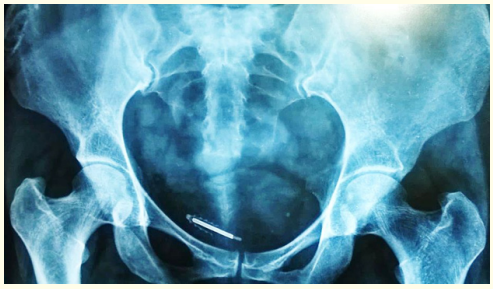

Figure 1: *X-ray confirming the presence of IUCD in pelvis.*

Figure 2: *IUCD visualized in urinary bladder at TVS.*

With a clinical diagnosis of primary misplacement of IUCD in urinary bladder, cystoscopy was performed under local anaesthesia. The Multi load device was visualized near left ureteric orifice in the bladder (Image 3). Rest of bladder wall and bilateral ureteric orifice were normal except for a small area of ulceration in the posterior bladder wall about 2cm from internal urethral meatus close to the trigone on the left side (Image 4). The IUCD (Image 5) was removed by pulling on its threads with grasping forceps introduced through cystoscope.

The postoperative period was uneventful. Pain and dysuria gradually subsided. Patient was discharged on day 3 with advice to follow up in Family Welfare department for further advice on family planning.

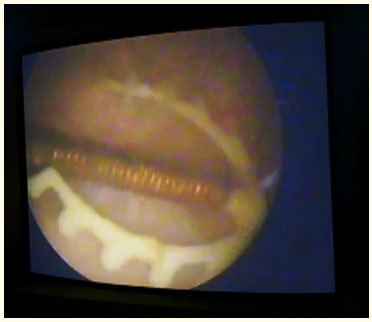

Figure 3: *IUCD visualized in urinary bladder at cystoscopy.*

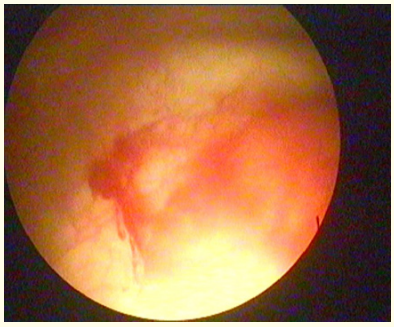

Figure 4: *Small ulceration in posterior bladder wall- possible point of perforation.*

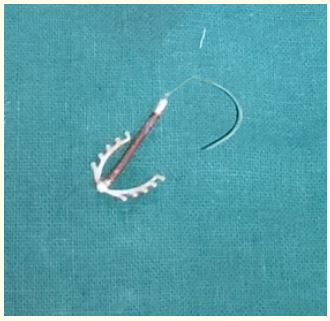

Figure 5: *IUCD removed from urinary bladder.*

Discussion

Intrauterine contraceptive device is the most popular method of reversible contraception due to its high efficacy for fertility regulation, low-risk, and low-cost [6]. Complications due to IUCD include spontaneous expulsion, pelvic inflammatory disease (PID), uterine perforation, heavy bleeding, dysmenorrhea, and unplanned pregnancy. Perforation of the uterus with migration into adjacent organ is a known complication of IUCD use. It is thought to occur most often at the time of insertion. Factors associated with increased likelihood of uterine perforation include small uterine size, position, and timing of insertion (post abortal uterus is soft and enlarged), operator skill, uterine anomaly, previous cesarean section and sepsis. Improper insertion technique and uterine retroversion are considered especially

important. In the present case the acutely retroverted uterus was probably not appreciated at the time of insertion. It seems as if the IUCD had been placed primarily into the bladder through a false tract formed through the anterior uterine wall at the level of internal OS.

Spontaneous secondary perforation with migration into bladder has been frequently reported. Mechanism of this migration has been attributed to uterine contraction, bowel peristalsis and urinary bladder [7]. The misplaced IUCD may remain asymptomatic, may be expelled in faeces or in case of migration into bladder, features of urinary tract infection and bladder irritation such as dysuria, suprapubic pain, hematuria and even a bladder calculus may develop [8,9]. Recurrent UTI following IUCD insertion, and non-localization of its thread on gynaecological examination should raise suspicion of its migration into bladder.

Different sites of migration of IUCD following uterine perforation into the bladder, pelvis abdominal cavity, and large gut (Table 1) have been reported in literature. In patients with IUCD misplaced in abdominal cavity, missing thread, vague abdominal pain and perception of fullness in abdomen were the most common symptoms. In trans-vesical migration of IUCD, LUTS (lower urinary tract symptoms) including dysuria, frequency and hematuria were most commonly the presenting complaints (Table 2). Majority of cases were diagnosed either during treatment of bladder calculus or following an accidental pregnancy. IUCD misplaced in the urinary bladder needs to be removed to avoid complications like recurrent UTI, formation of bladder stone, pelvic abscess, rupture of bladder and adhesion formation.

Location of IUCD	Author	Symptoms	Route of removal
Rectus muscle	Imtiaz Wani., *et al*. [10]	Swelling and pain lower abdomen	Laparotomy
Recto-sigmoid colon	Laleng M Darlong., *et al*. [11]	Dyschezia, lost thread	Colonoscope
Impacted in anal wall	N Elahi., *et al*. [12]	Felt thread while straining at stools	Proctoscope
Mesosalpinx	Krupa., *et al*. [13]	Flank pain	Laparoscope
Pelvic wall	Anu Bajracharya., *et al*. [14]	Lower abdominal pain	laparoscope
Adherent to mass, omentum or gut	N Elahi., *et al*. [12]	Lower abdominal pain with pregnancy	Laparoscopy followed by laparotomy

Table 1: *IUCD location in different sites and its removal.*

	Author	Number of cases	Symptoms	Suspected mode of displacement	Management
Misplaced IUCD in bladder stone	Sallami., *et al*. [6]	9	LUTS	Secondary migration	Cystoscopy removal
	Jayadeva., *et al*. [15]	1	LUTS	Secondary migration	Cystoscopy removal
	Sallami., *et al*. [6]	1	LUTS	?Primary placement	Cystoscopy removal
	Santosh K Singh., *et al*. [16]	1	LUTS	?Primary placement	Cystoscopy removal
Misplaced IUCD with accidental pregnancy	Sallami., *et al*. [6]	5	LUTS and amenorrhea	Secondary migration	Cystoscopy removal
	Zehra., *et al*. [17]	1	Lower abdominal pain with amenorrhea	Secondary migration	Open bladder surgery

Table 2: *IUCD location in urinary bladder - symptoms and treatment.*

In another series of 324 cases with misplaced IUD, 258 (79.9%) were found to have copper-T in the uterine cavity, in 47 (14.5%) it had shifted down into cervical canal. In 18 cases (5.6%), it was lying outside the uterine cavity; of these 66.7% were inserted at primary health centers [18].

We came across two case reports with suspected primary misplacement in bladder [6,16]. In both the cases, the IUCD was detected years after insertion due to symptomatic bladder stone.

Cystoscopy is a minimally invasive approach for removal of an IUCD that is not embedded in the bladder. For deeply embedded IUCD or with large calculus, suprapubic cystostomy or open bladder surgery may be needed for its removal. Of the 18 case reports in Table 2, all except one could be managed through cystoscopy. Open bladder surgery was required in one case due to deeply embedded device.

In the present case, misplaced IUCD was detected in about a week after insertion. At cystoscopy, it was found lying free in bladder and was easily removed.

Conclusion

The objective of this presentation is to highlight yet again the need for proper training and imparting of necessary skills at clinical examination and IUCD insertion to the health workers involved in family welfare services. This is especially important in low and middle income countries where IUCD use is very popular and access to health care facilities may not be easily available for the patients. Much of the family planning services are imparted by trained health workers.

Conflict of Interest

None.

Bibliography

1. Tuncay YA., *et al*. "Transuterine migration as a complication of intrauterine contraceptive devices: six case reports". *The European Journal of Contraception & Reproductive Health Care* 9.3 (2004): 194-200.
2. United Nations. World Contraceptive Use 2011.
3. Buhling KJ., *et al*. "Worldwide use of intrauterine contraception: a review". *Contraception* 89.3 (2014): 162-173.
4. Thomalla JV. "Perforation of urinary bladder by intrauterine device". *Urology* 27.3 (1986): 260-264.
5. Schoenfeld A., *et al*. "Bladder perforation by an intrauterine device". *Journal of Clinical Ultrasound* 19.3 (1991): 175-177.
6. Sallami S., *et al*. "Bladder calculus resulting from the migration of an intrauterine contraceptive device: A report of ten cases". *International Journal of Nephro-Urology* 3.1 (2011): 54-61.
7. Eke N and Okpani AO. "Extrauterine translocated contraceptive device: a presentation of five cases and revisit of the enigmatic issues of iatrogenic perforation and migration". *African Journal of Reproductive Health* 7.3 (2003): 117-123.
8. Istanbulluoglu MO., *et al*. "Bladder perforation related to intrauterine device". *Journal of the Chinese Medical Association* 71.4 (2008): 207-209.
9. Grimes DA. "Intrauterine device and upper-genital-tract infection". *Lancet* 356.9234 (2000): 1013-1119.
10. Imtiaz W., *et al*. "Intrauterine contraceptive device migration presenting as abdominal wall swelling: a case report". *Case Reports in Surgery* (2011).
11. Darlong LM., *et al*. "Colonoscopic retrieval of migrated copper-T". *Journal of Minimal Access Surgery* 5.2 (2009): 40-42.
12. N. Elahi and H. Koukab. "Diagnosis and management of lost intrauterine contraceptive device". *Journal of Pakistan Medical Association* 52.18 (2002).
13. Krupa BM., *et al*. "Case report: misplaced copper - T device". *International Journal of Science and Research* 4.6 (2015): 2229-2230.
14. Bajracharya A and Saha R. "Laproscopic retrieval of displaced Copper T: Two case reports". *Journal of Kathmandu Medical College* 3.1 (2014): 38-40.

15. Jayadeva AR and Lakshmi AY. "Urinary bladder perforation by an intrauterine contraceptive device." *Indian Journal of Urology* 18.1 (2001): 78-79.
16. Santosh KS., *et al*. "Unusual placement of an IUD; Presenting as vesicle calculus: A Case Report". *International Journal of Nephro-Urology* 2.2 (2010): 379-382.
17. Zehra K., *et al*. "Ectopic intrauterine device in the bladder of a pregnant woman". *Case Reports in Medicine* (2010).
18. Barsaul M., *et al*. "324 cases of misplaced IUCD-a 5-year study". *Tropical Doctor* 33.1 (2003): 11-12.

Volume 2 Issue 1 August 2015