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Translocated Intrauterine Contraceptive Device Forming Stone in Urinary Bladder: A Case Report

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Abstract *– IUD, the most commonly used method of contraception by women worldwide , can very rarely migrate to urinary bladder, occasionally leading to stone formation around it. However, because of its non-specific manifestations and a very low index of suspicion, the early diagnosis of this entity is difficult. We present a case of 25 year old female who presented with complaints of lower abdominal discomfort and urinary tract symptoms. On investigation, NCCT-KUB showed a bladder stone. She underwent cystolithotomy and a T shaped bladder stone was removed from the bladder. Adequate counseling of the patient should always be done before insertion of IUD. Also a high index of suspicion should be kept in mind while dealing with patients who present with lower abdominal discomfort and missing IUD string on vaginal examination, for early removal of IUD.*

Keywords *– Lower abdominal discomfort, Missing IUD, Secondary bladder stone, NCCT-KUB, Transmigration.*

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I. Introduction

Two types of stones are usually formed in the bladder, those that appear to have formed in the upper urinary tract and are trapped in the urinary bladder and those that are formed in the bladder in the presence of various types of outlet obstructions. Sometimes, bladder stone develop because of foreign bodies in the bladder [1,2].

Intrauterine device is the most widely used reversible way of contraception worldwide[3]. It is however associated with a number of complications like dysmennorrhoea, pelvic inflammatory disease, unwanted pregnancy and spontaneous abortion.

Migration of intrauterine devices to adjoining sites in the body even after proper and satisfactory insertion into the uterine cavity has been known [4].

In this report, we present a case of intravesical migration of a IUD around which a secondary vesicle calculus was formed.

II. Case Report

My patient, a 33 yr old female from a poor socioeconomic status presented with complaints of pain in lower abdomen since last 6 months. The patient also complained of on and off burning micturition and increased frequency for which she used to take medications from a local practitioner. A thorough physical evaluation of the patient was done. Abdominal examination showed mild suprapubic tenderness on deep palpation without any other significant findings. The use of contraceptive device could not be ascertained. Abdominal Ultrasound did not show any abnormal findings. However, since the patient was having recurrent urinary complaint and abdominal pain, NCCT-KUB was requested. It showed a solitary T shaped bladder stone.

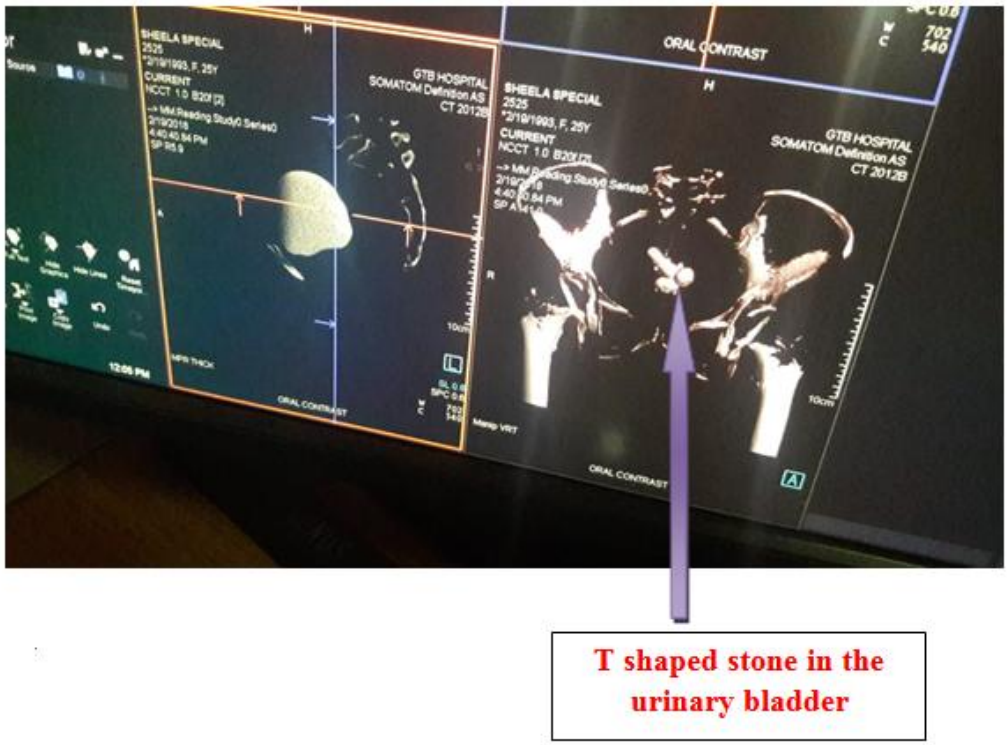

Figure 1: NCCT-KUB showing bladder stone.

On open surgical exploration, a solitary stone in the shaped of an IUD was found in the urinary bladder. There was no obvious fistula connecting the bladder to the uterus, no adhesion between the bladder and uterus, no bladder diverticulae and normal internal bladder openings. The stone was removed and, bladder and abdomen were closed in layers. The patient came out postoperatively very well. The patient has been asymptomatic since discharge.

Figure 2 : The removed bladder stone formed around IUD.

III. Discussion

Most primary bladder stones are aggregate of calcium oxalate crystals in the kidney and then descend to the bladder where they acquire secondary deposits of calcium phosphate, magnesium ammonium phosphate, or ammonium acid urate [2,5]. Sometimes, bladder stones develop because of foreign body in the bladder. Surgical sutures and urological materials are the most common foreign bodies around which bladder stones are formed [2,5,6,7].

An intrauterine contraceptive device are small often T-shaped birth control devices, which are inserted into the uterus for preventing pregnancy. Some of the common complications of IUD include menorrhagia, ectopic pregnancy, migration and expulsion [8]. Increased risk of pelvic inflammatory disease and infertility has also been reported [9].

Migration of the IUD to the bladder from uterus is a rare complication [10,11]. Kassab et al has reported 165 cases of IUD migration spanning 18 years. They were located in appendix, omentum, peritoneum, small bowel, bladder, recto-sigmoid, iliac vein and adnexae [12].

The most common explanation for these migration has been overlooked iatrogenic perforation, spontaneous uterine contraction, gut peristalsis, involuntary bladder contraction and also peritoneal fluid movement [19]. The cause for migration in our case could not be ascertained. IUD in the bladder invokes recurrent urinary tract infection which results in stone formation.

Presently, there are several minimally invasive method for the retrieval of foreign body in the bladder that have been documented showing complete clearance of the bladder [3,10,11,13-18]. Cystoscopy, percutaneous approach or combination of cystoscopy and laparoscopy with laser have shown satisfactory results [18].

However, in our case, open surgery was performed as the cystoscopy instrument was under repair at that point of time at our centre.

Adequate counseling regarding expectation with IUD placement and proper record keeping will help to prevent complications like forgotten/ missing IUD.

IV. Conclusion

Migration of IUD to the bladder forming vesical calculus is a rare complication. Lower abdominal discomfort with a missing IUCD string on vaginal examination should arise the suspicion of intravesical migration of the device. The diagnosis can be confirmed by pelvic ultrasound and if confirmed, early retrieval of IUD should be done, so as to prevent secondary calculus in the bladder.

Declarations

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Conflict of interest : None declared.

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