Case Report

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Formation of A Vesical Calculus Over A Migrated IUCD: A Case Report

Surgery Section

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ABSTRACT

Intrauterine contraceptive device (IUCD) has been one of the most common methods of contraception by women over 3 decades. IUCD is still the most common method of contraception amongst women in remote areas where adequate pharmaceutical aids like contraceptive pills and vaginal condoms donot reach common women owing to social and economic barriers. Uterine perforation due to an IUCD is very rare, having an incidence of 0.04% to 2.8 %. We report such a case of vesical calculus formed over a migrated IUCD, whose tail was identified as a nidus intraoperatively.

Keywords: Cystolithotomy, Lost thread, Uterine perforation

CASE REPORT

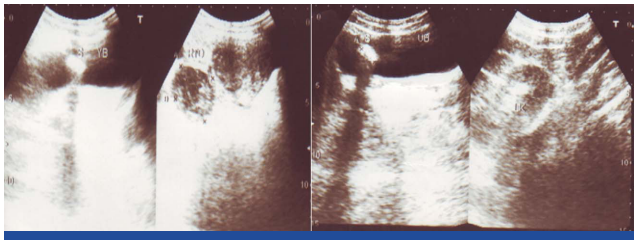
A 29-year-old female, hailing from a small village, presented to Dayanand Medical College and Hospital, Ludhiana in the Department of General Surgery with complaints of recurrent UTI and right flank pain since past 3 months. She also gave a history of an unretreived IUCD inserted 6 years back. Routine clinical examination revealed predominance of Lower urinary tract symptoms with mild suprapubic tenderness. No threads could be detected on vaginal examination. Routine laboratory investigations revealed significant bacteriuria and hematuria. She underwent routine transabdominal ultrasonography which revealed a 14 mm echogenic mass in the bladder with distal acoustic shadow which did not change its position after changing position of patient [Table/Fig-1]. The bladder was also found to be thickened. On a plain X-ray KUB correlation, a 15 x 10 mm radiopaque shadow was found in right hemipelvis with high suspicion of it being a distal ureteric or a vesical calculus [Table/Fig-2]. A copper-T could be seen in the right hemipelvis in close approximation to the calculus.

Subsequently, she underwent a cystoscopy which revealed a mulberry stone formed over a thread. On manipulating the stone, it was found that proximal end of the thread was piercing into the wall of the bladder and couldnot be retrieved with traction. Keeping a high suspicion of a migrated IUCD, a hysteroscopy was done which could not detect any IUCD inside the uterus.

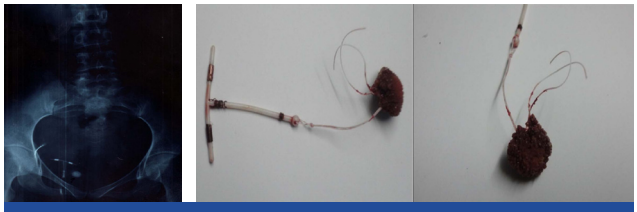
Eventually, an open cystolithotomy was done which revealed a 2.5 x 4 cm calculus adhered to the right antero-superior wall of urinary bladder formed over a thread. The proximal part of the thread was seen piercing the bladder wall. On mobilization of bladder and it was found that the thread was of a migrated IUD (Copper T) which was seen to lie in the uterovesical space with its vertical limb partly embedded into the bladder wall and the threads lying in the bladder, having perforated it completely. The IUD was separated from the bladder and uterus, the stone retrieved en-mass with the IUD [Table/Fig-3] and the perforated part of the bladder repaired along with the cystolithotomy incision in double layers using an absorbable vicryl 1-0 suture. There was no weak or perforated part found in the uterine wall, probably indicating the spontaneous repair of the uterus owing to the gradual and chronic migration, neither was any part of the IUD perforated or adhered to the uterine wall. The patient was kept catheterized for a week following which it was removed and patient was discharged in asymptomatic condition.

DISCUSSION

Intrauterine contraceptive device is the most popular method of family planning due to its high efficacy for contraception and low cost. Some known complications are spontaneous abortion, pelvic inflammatory disease (PID), septic abortion, migration into adjacent structure, bowel perforation and vesico-uterine fistula. Other reported complications includes dysmenorrhea, hypermenorrhea, pelvic pain, ectopic pregnancy and uterine rupture. The rate of uterine perforation



[Table/Fig-1] : Shows echogenic mass with posterior acoustic shadows s/o vesical/distal ureteric calculus



[Table/Fig-2] : Shows an IUCD and a radiopaque shadow (vesical/distal ureteric calculus lying in the right hemipelvis
[Table/Fig-3] : Intra-operative Images after en-mass retrieval of copper-T and the stone formed over its thread

with IUD has been estimated to between 0-1.6 per 1000 insertion [1,2]. Till date, approximately about 100 cases of IUCD perforation and migration to the bladder have been reported in the scientific literature and about half of them resulted in bladder stone formation. Several mechanisms can explain the spontaneous migration of IUCDs, including iatrogenic uterine perforation, spontaneous uterine contraction, involuntary bladder contraction, and peritoneal fluid movement [3]. Slow migration of IUD from uterus into bladder with formation of vesical stone is unusual and this has been reported earlier, 1 month, 3 month, 3 years and 13 years, partially or completely encrusted with calculi. The migrated IUD may remain asymptomatic and may be discovered incidentally. However, they may also produce symptoms such as increased urinary frequency, suprapubic tenderness, painful micturition, blood in the urine, UTI or an obstructive uropathy secondary to stones [4,5].

Extrauterine IUCD produce inflammatory reactions and adhesions due to the copper presentin them. Thus, it has been advised in various studies to remove all the migrated IUCD s irrespective of their being asymptomatic [6]. Various treatment modalities have been used for the treatment of migrated IUCDs. Cystoscopy and extraction of the device along with the stones is the treatment of choice if the foreign body is located completely inside the bladder, or if the calculi are small. This approach has a high success rate and less morbidity. In case of large stones lithotripsy may be needed before extraction of the stones.

CONCLUSION

In case of a patient with chronic pelvic pain and voiding symptoms who has a history of an unretrieved IUCD a possibility of perforation of the uterus and intravesical migration of IUCD must be kept in mind. Also, when IUCD strings are not observed in the vagina during examination and are not detected in the endometrial cavity using ultrasonography or hysteroscopy, a physician must consider IUCD displacement and order for further investigations including urinary tract imaging studies like ultrasonography and plain radiographs of the abdomen which can reveal the IUCD and calculus lying in the pelvis. A computed tomography can also be taken to know the anatomy and the exact location of the foreign body. An IUCD that migrates into the bladder must be removed because of associated complications.

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