

Secondary vesical calculus resulting from the migration of an intra uterine device – a rare case report

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Abstract: Migration of the intrauterine devices (IUD) into the bladder is a rare complication but it can cause further grievous consequences. Here we present a case of secondary vesical calculus resulting from migrated IUD. The case was managed by cystoscopic stone fragmentation and complete removal of stone fragments with IUD. Early diagnosis by a high index of suspicion and IUD removal may prevent further complications.

Keywords: Intrauterine devices, Migration, secondary vesical calculus.

INTRODUCTION:

Intrauterine devices (IUDs) are currently one of the most popular reversible contraception methods used worldwide because of its high efficacy for fertility regulation, low-cost and low complication rates.[1] Migration of the intrauterine devices into the bladder is a rare complication (only seventy cases reported till date) but it can cause further grievous consequences e.g. Recurrent urinary tract infections, Hematuria, secondary vesical calculus and vesicouterine fistula.[2] Early diagnosis by a high index of suspicion and IUD removal may prevent these complications. Here we present a case of secondary vesical calculus resulting from migrated IUD.

CASE REPORT

A 26-year-old woman presented to us with a complaint of irritative lower urinary tract symptoms with recurrent urinary tract infection despite appropriate antibiotics therapy for last 6 months. On further inquiry, she accepted a history of copper-T intrauterine device insertion three years back, and the IUD was missing. Unable to locate the device by gynecologist assumed that it had fallen out and no further evaluation was done to rule out migration of IUD. On examination vitals were within normal limits. Mild suprapubic tenderness, UB nonpalpable, Urethral meatus, and external genitalia were normal.

Urine Analysis showed Pus cells- 25/HPF, C/S – Esch. coli sensitive with 3rd gen. cephalosporins and amikacin. Abdominal ultrasonogram showed a long 6cm. vesical calculus, freely moving in the urinary bladder.[Fig-1] On x-ray KUB T-shaped stone covering the IUD is seen in the pelvis.[Fig-2]. Cystoscopy

showed a totally mobile T-shaped bladder stone covering the IUD with no bladder mucosal lesions [Fig-3].



Fig 1: Long vesical calculus over IUD



Fig 2: Digital x-ray KUB showing T shaped calculus in pelvis



Fig 3: Cystoscopic view of IUD covered by calculus

The case was managed by Cystoscopic Stone fragmentation by using pneumatic lithotripter and then all fragments of the stone and IUD were removed by a grasping forceps without any complication.[Figure 4] Patient is asymptomatic and no urinary tract infection reported in last six months of follow-up.



Fig 4: Cystoscopically removed fragmented IUD covered by stones

DISCUSSION

Although perforation of the uterus by an intrauterine contraceptive device is not uncommon but intravesical migration is a very rare and can cause grievous complication. Urological Complications resulting from migration of IUDs are intravesical migration leading to formation secondary vesical calculi and vesicouterine fistula and retroperitoneal migration leading to fibrosis around the pelvic ureter and hydroureter nephrosis (Two cases reported) [3].

The mechanisms of intravesical migration of IUD are:

1. Primary uterine and bladder perforation by IUD at the time of insertion (In risk Group).

2. Secondary perforation by slow migration (augmented by spontaneous uterine and urinary bladder contractions).
3. The consequence of inserting IUD incorrectly in the bladder through the urethra.[4]

Patients initially present with Persistent irritative lower urinary tract symptoms, hematuria, and recurrent urinary tract infections. Diagnosis can easily confirm by basic imaging and cystoscopy [5].

Although the management of the migrating IUD in asymptomatic patients remains controversial but all migrated IUDs in the bladder must be removed, even if it is asymptomatic, for the prevention of further complications. The IUD should be correctly inserted by an experienced person. A proper selection of patient and a thorough history and physical examination is crucial. If the uterine rupture is suspected, US should be performed to determine the probable location of the rupture. Women should be informed of the potential complications and should be suggested to check the device string regularly. If the string is not found, abdominal radiography is required even in asymptomatic patients. Secondary vesical calculi are very unusual in women and presence of intravesical stones should raise suspicion of the presence of a foreign body. Recurrent urinary tract infections after appropriate antibiotic therapy should also arouse suspicion of a foreign body in the urinary tract.

CONCLUSION

A careful search for the lost device must be performed with the hope of preventing dangerous sequelae. Any women in whom IUCD is placed and who presents with lower urinary tract symptoms, the possibility of intravesical migration of the device should always be considered in the differential diagnosis. Cystoscopic retrieval is feasible and safe in cases with intravesical migrated IUD and suprapubic cystostomy required rarely. The most effective treatment remains prevention.

REFERENCES

1. Mustafa Okan Istanbuloglu, Emel Ebru Ozcimen, Bulent Ozturk, Ayla Uckuyu, Tufan Cicek, Murat Gonen; Bladder Perforation Related to Intrauterine Device; J Chin Med Assoc April 2008; 71(4).
2. Eric J. Hick Javier, Hernández Raul, Yordánallen F. Morey Ricardoavilés, Carlos R. García; Bladder calculus formation by migrated intrauterine contraceptive device; The Journal of Urology 2004; 172(5):1903.
3. El-Hefnawy AS, El-Nahas AR, Osman Y, Bazeed MA; Urinary complications of migrated intrauterine contraceptive device; Int Urogynecol J Pelvic Floor Dysfunct. 2008;19(2):241-5. Epub 2007 Jul 14.

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4. SallamiSataa, Ben Rhouma Sami, RebaiSabeur, Cherif Karim, Horchani Ali; Bladder Calculus Resulting from the Migration of an Intrauterine Contraceptive Device; Int J Nephrol Urol, 2011; 3(1): 54-61.
 5. Jayadeva AR, Lakshmi AY; Urinary bladder perforation by an intrauterine contraceptive device; Indian journal of urology; 2001; 18(1):78-79.