# Looking beyond vesical calculi

**B. Sureka, M. K. Mittal, M. Sinha, B. B. Thukral**

Department of Radiodiagnosis and Imaging, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi, India

A 28-year-old female presented with complaints of dysuria and pain in suprapubic region for 6 months. General examination revealed mild tenderness in the suprapubic region. Intrauterine contraceptive device (IUCD) was inserted 4 years back after the delivery of her first child. Patient had also underwent tubal ligation procedure since string of IUCD could not be located by her thinking of possible expulsion of the IUCD. String of IUCD could not be located this time also during Gynecological examination. Patient was referred for X-ray abdomen, which showed radio-opaque shadows implanted on a T-shaped IUCD in the pelvis [Figure 1]. Pelvic ultrasound examination showed multiple vesical calculi largest measuring 3.5 cm along with a linear hyperechoic structure projecting in the urinary bladder which was identified as the misplaced IUCD [Figure 2]. Patient underwent open cystolithotomy with fistula repair. Intraoperatively multiple vesical calculi embedded in the IUCD was found [Figure 3].

IUCDs are safe and effective form of contraception. Complications associated with IUCD include vaginal bleeding, pain, expulsion, ectopic pregnancy, septic abortion and rarely uterine perforation.[1] The incidence of uterine perforation by an IUCD ranges from 0.05 to 13/1000 insertions.[2] The risk of perforation is maximum at the time of IUCD insertion. The mechanism behind the migration of IUCD is uterine contractions leading to migration into the abdominal cavity and other organs. In 85% of the cases, uterine perforation by an IUCD is asymptomatic. In the remaining cases, extrauterine migration in the adnexa, broad ligament, pouch of Douglas, urinary bladder and intestines is seen.[3]

Urological complications of IUCD include migration into the urinary bladder with calculus formation, ureteric calculus leading to obstruction, pyelonephritis, persistent lower urinary tract symptoms, vesico-uterine fistula and rarely menouria (hematuria during menses). Diagnosis is usually made on ultrasound and confirmed on cystoscopy. Review of the literature reveals that most cases of

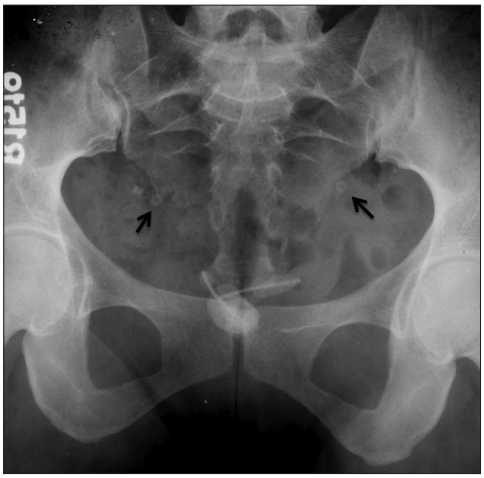

**Figure 1: X-ray pelvis showing multiple vesical calculi implanted upon the T-shaped intrauterine contraceptive device with faloperings (arrow) *in situ***

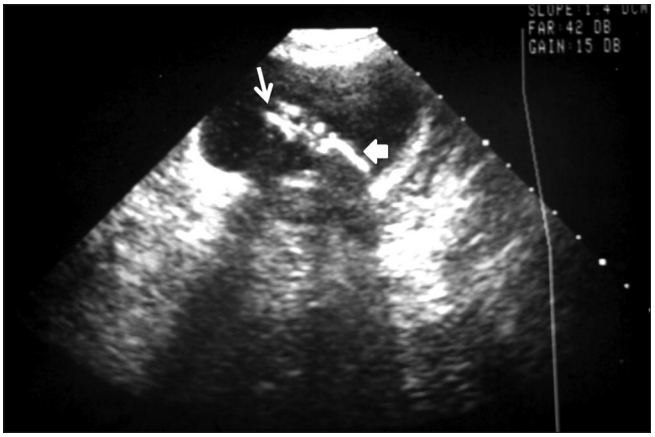


**Figure 2: Ultrasound showing multiple calculi (arrow) and a linear echogenic focus (arrowhead) suggestive of intrauterine device within the urinary bladder**

**Address for correspondence:**
Dr. Binit Sureka, Department of Radiodiagnosis and Imaging, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi - 110 029, India.
E-mail: binitsureka@hotmail.com

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|---|---|
| Quick Response Code: | Website: www.indianjnephrol.org |
| | DOI: 10.4103/0971-4065.125134 |

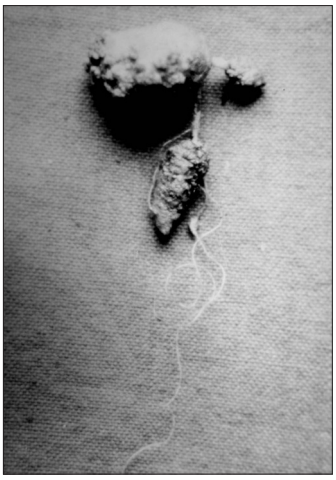

**Figure 3: Post-operative photograph of specimen showing multiple calculi implanted upon the intrauterine device with its string *in situ***

intravesical migration of IUCDs have been associated with hormone releasing IUCDs.[4]

On transvaginal ultrasound, IUCD migration is diagnosed when the distance between the superior edge of IUCD to the outer edge of the uterine fundus and the myometrial thickness is >3 mm at immediate post-insertion. The downward migration is defined as an increase of more than 5 mm of this distance from the initial location.[5]

The most effective treatment remains prevention. The intrauterine device IUD should be correctly inserted by an experienced person after proper selection of the patient. In females with a history of IUCD insertion, presenting with the complaints of recurrent urinary tract infections inspite of appropriate antibiotic therapy, the possibility of intravesical migration of the device should also be kept in mind.

## References


1. Caspi B, Rabinerson D, Appelman Z, Kaplan B. Penetration of the bladder by a perforating intrauterine contraceptive device: A sonographic diagnosis. Ultrasound Obstet Gynecol 1996;7:458-60.
2. Grimaldi L, De Giorgio F, Andreotta P, D'Alessio MC, Piscicelli C, Pascali VL. Medicolegal aspects of an unusual uterine perforation with multiload-Cu 375R. Am J Forensic Med Pathol 2005;26:365-6.
3. Phupong V, Sueblinvong T, Pruksananonda K, Taneepanichskul S, Triratanachat S. Uterine perforation with Lippes loop intrauterine device-associated actinomycosis: A case report and review of the literature. Contraception 2000;61:347-50.
4. Khan ZA, Khan SA, Williams A, Mobb GE. Intravesical migration of levonorgestrel-releasing intrauterine system (LNG-IUS) with calculus formation. Eur J Contracept Reprod Health Care 2006;11:243-5.
5. Petta CA, Faúndes D, Pimentel E, Diaz J, Bahamondes L. The use of vaginal ultrasound to identify copper T IUDs at high risk of expulsion. Contraception 1996;54:287-9.


**How to cite this article:** Sureka B, Mittal MK, Sinha M, Thukral BB. Looking beyond vesical calculi. Indian J Nephrol 2014;24:63-4.

**Source of Support:** Nil, **Conflict of Interest:** None declared.