

COPPER-T PRESENTING AS VESICAL CALCULUS

Shazia Majid Khan¹, Mohammed Jahangir², Mohammed Suleman Khan²

ABSTRACT

Intrauterine contraceptive devices (IUCD), in various forms have been in use since the time immemorial. Perforation of the uterus and migration of IUCD to adjacent structures is not an unusual occurrence but their intravesical migration with secondary stone formation is a unique complication. We present an interesting case of a 35 years old lady who met with this complication. This lady had intrauterine contraceptive device (Copper-T) placement 9 years back and a few days earlier presented to us with lower urinary tract symptoms. She underwent ultrasonographic scan and stone bladder was detected as the cause of her symptoms. Open cystolithotomy was performed and a T-shaped vesical calculus retrieved.

Key words: Urinary tract infection. Vesical calculus. Intrauterine contraceptive device.

INTRODUCTION

Intrauterine contraceptive devices are easily available and because of their low cost and the fact that these devices can be placed by even a trained Dai, they constitute a popular method of contraception. IUCD, in addition to its advantages, is also associated with many complications, the most serious being the perforation of the uterus and its migration to some adjacent organ. Migration of the device into the urinary bladder initiates crystal deposition on it, like any foreign body inside the bladder & thus the result is stone formation. Such patient can present with irritative or obstructive lower urinary tract symptoms because of the presence of stone inside the urinary bladder.

CASE REPORT

A 35 years old lady presented with the history of lower abdominal pain, off and on along with history of frequency of micturition, dysuria and urgency. She had recurrent attacks of these symptoms for the last 3 years. She had been taking medicines from various doctors and got relieved but temporarily. She gave history of IUCD

(Copper-T) insertion 9 years back by a traditional birth attendant. According to her narration, it was a painful experience. Thread of this device expelled spontaneously four months after the insertion and she assumed on her own that her copper-T was also expelled. She did not consult any birth attendant or any lady doctor for its confirmation. Patient had two uneventful term deliveries after that. For the last 3 years she had been suffering from lower urinary tract symptoms. She had been consulting various doctors but only with temporary relief. Lastly she reported in the Department of Gynecology Sheikh Zayed Hospital, Rahim Yar Khan. On investigations her ultrasonic scan showed a large stone in her urinary bladder but without any evidence of IUCD. Patient was planned for surgery and open suprapubic cystolithotomy performed under general anaesthesia. Stone was lying free in the bladder cavity and it was in the form of 'T' because of crystal deposition over all the three limbs of the device. Scratching of the crystals from the centre of the stone revealed the junctional part of the copper-T and confirmed that it was a case of IUCD migration inside the urinary bladder with secondary stone formation. This specimen is now preserved in the pathology museum of Sheikh Zayed Medical College, Rahim Yar Khan. Postoperative recovery was uneventful. She was discharged after a week. She came for follow up 15 days later and is currently asymptomatic.

1. Obstetrics & Gynaecology Department,
Sheikh Zayed Medical College/Hospital,
Rahim Yar Khan.

2. Department of Surgery,
Sheikh Zayed Medical College/Hospital,
Rahim Yar Khan

Correspondence: Dr. Shazia Majid Khan,
Assistant Professor, Obstetrics & Gynaecology
Department

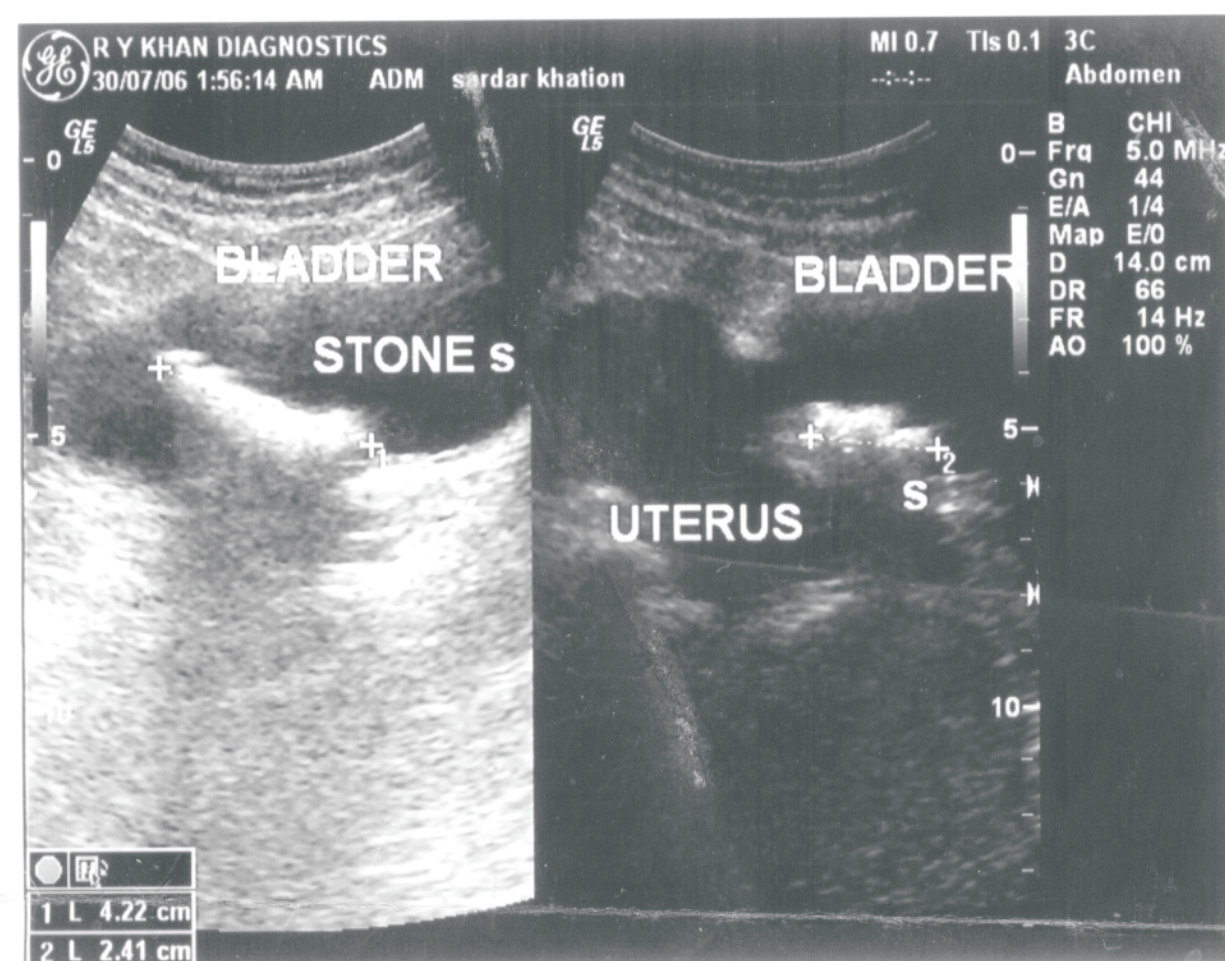
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Figure I:

'T' shaped vesicles calculus removed at open cystolithotomy.

**Figure II:**

Sonogram showing echogenic density in the urinary bladder.



DISCUSSION

Intrauterine contraceptive devices can be affected by many early and late complications, including uterine perforation and migration into adjacent structures. Although perforation of the uterus by an intrauterine device is not uncommon, intravesical migration with secondary stone formation is a rare complication.¹ Only 25 such cases were reported till 2001.² A variety of IUCDs had been reported to cause uterine perforation. In a study conducted at Stanfrod University Hospital Lippes Loop caused most perforations before

1977; however after 1978 most cases involved the Dalkon shield.³ In 2002 Atakan H, et al, Department of Urology, University of Trakya Faculty of Medicine, Edirne, Turkey, reported 'Intravesical Migration of Intrauterine Device resulting in stone formation' in a 27 year old woman in whom an intrauterine contraceptive device (Copper-T) migrated from the uterus to the bladder and resulted in formation of a stone⁴. In 2003 Rafique M, et al, Department of Urology, Nishtar Medical College, Multan, Pakistan, reported 'An Unusual Cause of Vesical Stone: A Migrant Intrauterine Device' in a 32 years old woman in whom an intrauterine contraceptive device (copper-T) migrated from her uterus in the bladder. She had lower urinary tract symptoms for nearly two years but sought no treatment. Onset of haematuria and fear of cancer prompted her to seek treatment⁵ and also in the same year, Demirci D, et al, Department of Urology, Medical Faculty, Erciyes University, Kayseri, Turkey, reported 'Big Bladder Stones Around an Intravesical Migrated Intrauterine Device' in a 33 years old woman in whom a copper-T intrauterine device had been placed two years back, presented complaining of irritative lower urinary tract symptoms.¹ In 2005, Amit Chaudhay, et al, Department of Surgery, King George Medical University, Lacknow, India, reported 'Migrated Intrauterine Device Presenting as a Bladder Stone' in a 35 years old lady presenting with a bladder stone formed over a migrated intrauterine device. The lady presented to her gynaecologist with amenorrhea for three months, irritative lower urinary tract symptoms and haematuria. History was suggestive of intrauterine contraceptive device placement ten years back.⁶ In 2006, Dede FS, et al, SSK Ankara Maternity and Women's Health Teaching Hospital, Ankara, Turkey, reported 'Vesical Calculus Formation Around a Migrated Copper-T 380-A' in a 28 years old woman who presented with recurrent urinary tract infections.⁷ In 2006, Khan ZA, et al, Gynaecology, The Royal Bolton Hospital, Bolton, UK, reported 'Intravesical Migration Of Levonorgestrel-Releasing Intrauterine System (LNG-IUS) With Calculus Formation' in a 28 years old woman in whom an intrauterine contraceptive device (LNG-IUS) migrated from the uterus to the bladder and resulted in stone formation.⁸ Factors contributing to the possibility of uterine perforation are inept insertion or positioning, fragility of the uterine wall due to recent birth, abortion, or

pregnancy⁹. In general, uterine perforation and migration of IUCD usually passes unnoticed; the diagnosis is made when the absence of string is noted at routine examination and can be proved by radiological examination. In our patient the diagnosis was made when she developed lower urinary tract symptoms. Radiological or ultrasound controls should be performed in the follow up of patients with intrauterine contraceptive devices.¹⁰ It is suggested that, any woman 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 diagnostic mimics. The importance of post-insertion follow up and the need for awareness of the migration of IUCD including intravesical migration cannot be overemphasized.

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