

# Missed Intrauterine Contraceptive Device Presenting As Urinary Bladder Stone

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## ABSTRACT

Presence of foreign body in urinary bladder is an uncommon condition. It often causes difficulty in diagnosis. A multiparous woman with history of intrauterine contraceptive device (copper T loop) placed two year back presented with urinary frequency, urgency, dysuria and suprapubic pain on frequent occasions. Investigation revealed a urinary bladder calculus encrusted upon displaced copper T loop. Cutaneous cystolithotomy was performed along with tubal ligation. Postoperative recovery was uneventful.

*Key words* Intrauterine contraceptive device, Urinary tract infection, Vesical calculus.

## INTRODUCTION:

Intrauterine contraceptive devices are safe and effective form of contraception used worldwide.<sup>1</sup> Jack Lippes in early 1960s had made the first model of double 'S' shaped intrauterine contraceptive device (IUCD). Subsequently Lippes loop and Margulies spiral made of inert polypropylene.<sup>2</sup> With the passage of time early copper IUCDs were superseded by a second generation of long lasting more effective devices.<sup>3</sup>

The very unusual complication of migration of IUCD was recorded in urinary bladder, sigmoid colon, ovary, peritoneum, omentum, small bowel, and appendix due to perforation of the uterus.<sup>4,5</sup> The perforation of uterus can be immediate or delayed. Immediate perforation occurs at the time of insertion of IUCD. However slow migration can occur progressively through the myometrial wall contraction.

The purpose of this report is to highlight the unusual cause of recurrent urinary tract infection in a female patients.

## CASE REPORT:

A thirty five year old female resident of neighbour country, presented in a private clinic with a history of frequent episodes of burning micturition, frequency, urgency and suprapubic pain. An IUCD was placed two years back. She had past history of urinary tract

infection for the last six months. There was no history of amenorrhea and pregnancy was excluded by performing urinary pregnancy test. General examination was unremarkable. Examination of the abdomen revealed mild tenderness in the hypogastric region. Gynaecological examination revealed no string of IUCD in the vagina. Cytobrush examination and endocervical speculum examination revealed no evidence of IUCD in the uterine cavity.

A plain x-ray abdomen showed a radio opaque shadow mounted on IUCD (copper T loop-Fig-I). Sonographic examination revealed a urinary bladder calculus measuring 3.2 cm along with a hyper echoic elongated shape structure projecting in the urinary bladder, representing misplaced IUCD. Consent for open cystolithotomy and tubal ligation was taken. At operation a calculus was found in the urinary bladder, with copper T loop embeded in it. One of the limbs was impacted in the wall of urinary bladder, which was removed easily by twisting technique. Tubal ligation was also performed by Pomeroy's method. Postoperative recovery was uneventful.



Fig I: Migrated copper-T with encrustation

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**DISCUSSION:**

Unusual foreign bodies in the urinary bladder like radio opaque wire, thin grass, elastic rubber, displaced IUCD etc have been reported in the literature.<sup>6</sup> Encrustation over Foleys catheter, abortion stick and displaced IUCD have also been recorded.<sup>7</sup> The index patient presented with frequent urinary tract infection due to urinary bladder calculi encrusted upon displaced IUCD.

A steady increase in the contraceptive use has been observed in both developed and developing countries.<sup>8</sup> One of the serious but rare complications of intrauterine contraception devices is displacement through the uterine wall perforation into the pelvic or abdominal cavity and adjacent viscera. A more likely sequence of events is partial perforation occurring at the time of insertion. Contraction of uterus then force the IUCD to continue its passage through the uterine wall.<sup>9</sup> In our patient the most likely explanation of displaced IUCD is slow delayed migration due to myometrial wall contraction.

Recurrent or chronic unexplained urinary tract infections should raise a high suspicion of the possible existence of a foreign body in the urethra or urinary bladder. Detection may be either by plain abdominal radiograph or by sonography.<sup>10</sup> In the management of missed or displaced IUCD it is imperative to exclude the pregnancy. Vaginal speculum examination is then performed to find the string. If the string is not visible then cytobrush is used to draw the string out. Removal of displaced IUCD device can be done through various techniques that depend upon location. In our patient displaced IUCD was recovered by open cystolithotomy. It is concluded that after the insertion of IUCD, the patient should be followed up regularly to check the string and investigated thoroughly for any vague abdominal discomfort.

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