

# Vesical calculus resulting from forgotten intrauterine contraceptive device

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## Citation

S Saha, L Mahapatara, N Kaur, U Shrivastava, S Gupta. *Vesical calculus resulting from forgotten intrauterine contraceptive device*. The Internet Journal of Gynecology and Obstetrics. 2008 Volume 11 Number 2.

## Abstract

Bladder calculi are uncommon in adults and usually result either from obstruction or foreign bodies. The present case report describes a 45 year old lady presenting with cystitis. Investigations revealed a bladder calculus encrusted on an intrauterine device (IUD), which was probably inserted 20 years back at the time of medical termination of pregnancy. Ballistic lithotripsy of the bladder stone with cystoscopic extraction of the IUD was successfully carried out.

## CASE

A 45-year-old lady presented with symptoms of dysuria, urinary frequency and lower abdominal pain for the last six months. She was diagnosed as having urinary tract infection and was prescribed antibiotics many times before with little improvement. She had no associated fever, vaginal discharge, irregular vaginal bleeding or haematuria.

On abdominal examination, there was tenderness in the lower abdominal with no palpable abdominal mass. Vaginal examination was normal and revealed no discharge. Urine routine microscopy revealed pus cells and culture grew E coli. Abdominal ultrasound revealed stone in the urinary bladder. X ray KUB (figure 1) showed a straight foreign body in the bladder with stone formation. Patient gave history of medical termination of pregnancy (MTP) 20 years back. and she denied the insertion of intrauterine contraceptive device.

Cystoscopy was done and it revealed the foreign body to be copper T with stone around it (figure 2). Ballistic lithotripsy of the bladder stone with cystoscopic extraction of the IUD was then performed (figure 3). Patient had an uneventful recovery. Foleys catheter was removed on day three and patient was discharged.

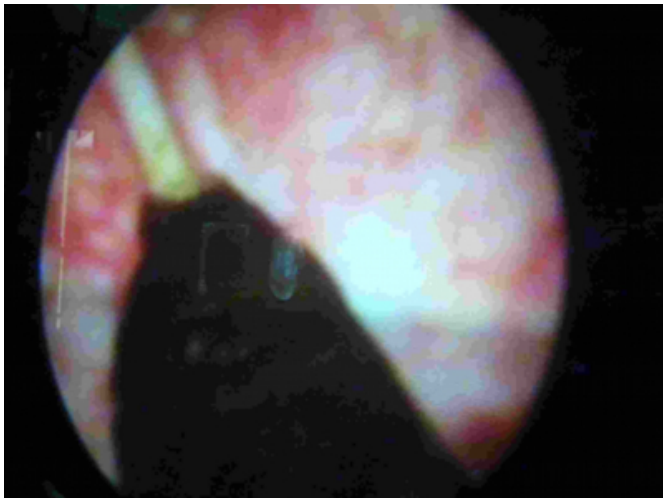
## Figure 1

Figure 1- X-ray KUB showing the bladder calculus



**Figure 2**

Figure 2- Cystoscopy showing the bladder stone and vertical limb of the copper T



**Figure 3**

Figure 3- Extracted copper T and stones



## DISCUSSION

Intrauterine device (IUD) is an accepted worldwide contraceptive instrument. Today the complications of IUD are rare and include spontaneous abortion, pelvic inflammatory disease (PID), uterine perforation, dysmenorrhea, heavy bleeding, and unplanned pregnancy.<sup>1</sup> Uterine perforation is one of the most serious but uncommon complications associated with an IUD. The rate of uterine perforation with IUD has been estimated to be between 0-1.6 per 1000 insertions.<sup>2</sup> The mechanism of perforation is thought to be the insertion procedure or chronic inflammatory reaction with gradual erosion through the uterine wall.<sup>3</sup> Slow migration of IUD from the uterus into the bladder with formation of vesical stone is unusual and this has been reported earlier. Patients typically present with irritative symptoms, recurrent urinary tract infections, hematuria and pelvic pain.<sup>4567891011</sup>

Vesical calculus is less common in females compared to males. Bladder calculi are most often seen in the setting of obstruction, foreign bodies, or an infection. Among females, those at higher risk include women who have undergone anti-incontinence surgeries and those with genital prolapse. Several procedures that can predispose a patient to stone formation include vesical neck suspension procedures or bladder augmentations. Prolonged Foley catheterization or another foreign body may also serve as a source of infection or nidus of crystallization.<sup>12</sup>

Combining medical termination of pregnancy with family planning services towards the goal of increasing contraceptive prevalence is very popular in India. Women seeking for MTP are counselled regarding contraception and intrauterine contraceptive device insertion is a common practice.<sup>13</sup> In this patient Copper T might have been inserted at the time of MTP but either the patient was either not properly informed or she had forgotten about the IUD, resulting in non-retrieval of the device.

Patients with IUD should be alerted about the possibility of its migration. Regular self examination for “missing threads” is useful in the early detection of migration of the IUD. A plain radiograph of the abdomen is usually the initial examination of choice to verify the presence of the IUD in the pelvis. Once found, an ultrasound examination has to be done to determine the location of the IUD relative to the uterus. The treatment of a migrated IUD is surgical, either laparoscopy or laparotomy. Withdrawal of the migrated IUD is advisable even if its migration has not given rise to any

clinical symptoms and can avoid further complications like bowel perforation, bladder perforation, or fistula formation.

<sup>14</sup> An IUD perforating the bladder may be removed by suprapubic cystotomy or by cystoscopy. Previous reports have shown that cystoscopic retrieval is feasible, safe and preferred option in cases with intravesical migrated IUD.

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## CONCLUSION

Vesical calculi are uncommon in adult women and their presence should raise the suspicion of the presence of a foreign body. This case highlights the importance of properly informing the patient regarding IUD at the time its insertion. Cystoscopic retrieval is feasible and safe in cases with intravesical migrated IUD.

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