Vesical Stone Following Intravesical Migration of IUCD: Case Report and Literature Review

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ABSTRACT

Background and Objectives: Very occasionally, vesical stones developed because of foreign bodies in the bladder. Various types of foreign bodies can be found in the urinary bladder. We report a case of vesical stone following intravesical migration of IUCD in a 46 year-old female multiparous patient. The ultrasonographic examination of the pelvis and plain X ray confirmed the diagnosis. She had 10 years history of an IUCD insertion. She became pregnant 3.5 years after the insertion. The case was managed surgicaly. The literature is reviewed about this rare cause of vesical stone.
Key words: Urinary bladder, Vesical stone, Uterus, IUCD .

INTRODUCTION:

Two types of stones are usually recognized in the bladder, those that appear to have formed in the upper tract and trapped in the urinary bladder and those that are formed in the bladder in the presence of various types of outlet obstruction. Very occasionally, bladder stones developed because of foreign bodies in the bladder [1] . These can be introduced via urethra, through the bladder wall like bullet, or as a complication of a previous nearby surgical procedure[2].We report a case of vesical stone following intravesical migration of intra-uterine contraceptive device (IUCD).

CASE REPORT:

A 46 year-old female multiparous (Gravda 11, Para 8, Abortion 3) presented with lower abdominal pain of one month duration, associated with dysuria, dribbling, & frequent urination . She had a 10 years history of an IUCD insertion . She became pregnant 3.5 years after insertion of the IUCD. The pregnancy continued and she had full term vaginal delivery of a healthy baby. She consulted gyneacologist for checking the IUCD, and was told that the IUCD had been expelled spontaneously depending on clinical examination only. The ultrasonographic examination of the pelvis showed a vesical stone, with suspicion of foreign body with it (Figure 1). Plain X ray showed presence of a vesical stone attached to IUCD (Figure 2). We failed to extract the stone with IUCD by cystoscopy. The stone & the device were removed surgically by suprapubic approach on 19th November 2003 in Rizgary Teaching Hospital / Erbil. The stone was attached to the IUCD (figure 3). One end of the IUCD was embedded into the wall of the urinary bladder. She made uneventful recovery, and discharged on the third postoperative day .

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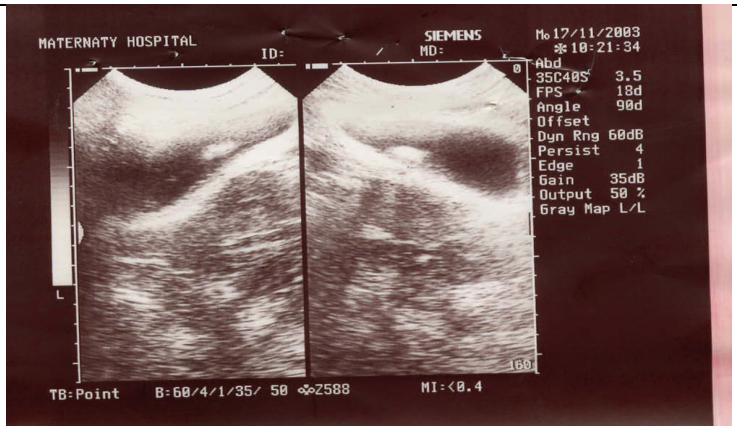
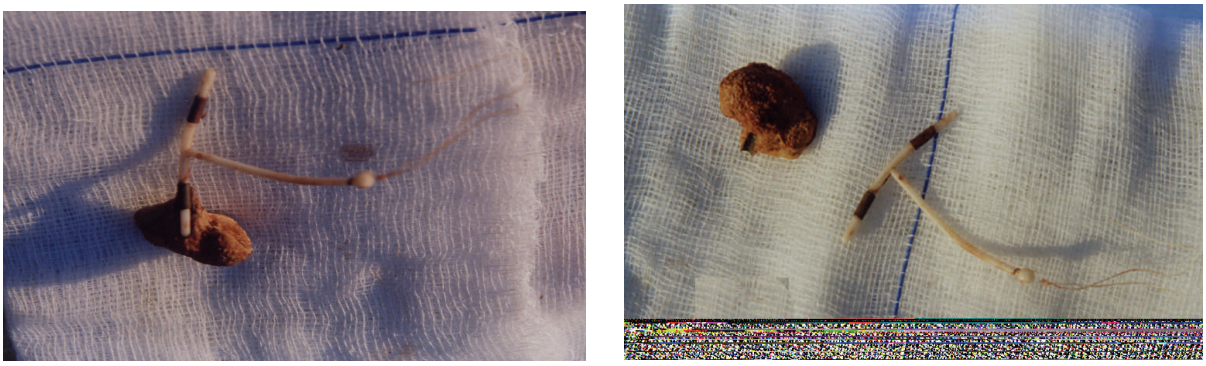


Figure 1: Ultrasound of the urinary bladder , showing the stone with suspicion of foreign body with it.

Figure 2: Plain X-ray showing the vesical stone attached to the IUCD.



A **B**

Figure 3: Showing the IUCD & the stone ; (A) the stone attached to the IUCD (B) after separation

DISCUSSION :

Vesical stones are unusual in female and their presence should arise the suspicion of the foreign body . In a woman with an unretrieved intrauterine device , the possibility of the migration of the device into the bladder should always be kept in mind [3] . Reviewing the literature shows that migration or displacement of IUCD is a sequel of perforation of the uterus by the device[1-8], although some believe that initial transuretheral insertion of the device may be the cause [9]. The incidence of uterine perforation by IUCD is unknown[4], although some believe that it is 1 in 1000[5]. It is generally believed that most perforations occur at time of insertion which is mostly through the fundus but it may involve the cervix as well[6]. The risk factors that predispose to uterine perforation are; untrained service provider, poor patients selection, unsuitable timing of insertion , immobile retroverted, congenitally malformed ,and fibroid uterus[7]. When uterine perforation by IUCD happens, the device may escape to Douglas pouch[8,] , urinary bladder[1-9], or peritoneal cavity, which may involve various lower intra-abdominal organs like sigmoid colon, and rectum[7] . In most of reported cases of migrated IUCD, including our case there is history of pregnancy after insertion [2,3]. Some cases have history of more than one pregnancy[1,7]. This means that pregnancy after insertion of IUCD indicates displacement of the device & it helps transmigration of IUCD to the bladder or other nearby organs. Ultrasound examination is helpful in localization of the migrated device[1-3,7,9] which can be confirmed by plain X-ray. It is not always possible to remove the vesical stone and the migrated device cystoscopically, operation by suprapubic approach may be necessary, as in our case, and some other reported cases [1,3,7,9].

CONCLUSION:

insertion of the IUCD needs proper training and experience. There should be routine post-insertion follow up for every patient . There is high incidence of transmigration of IUCD into the urinary bladder or any other nearby organs when there is history of pregnancy after it's insertion. Ultrasound and/or radiological examination should be routine in the evaluation in patients with history of unretrieved IUCD, when there is suspecion of complete or incomplete uterine perforation, and in patients with unrelenting urinary symptoms to rule out foreign bodies.

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