

Case Report

Sonographic Detection of Migrated Intravesical Intrauterine Device: A Case Report

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Abstract: Intrauterine device (IUD) is a widely used method of reversible contraception worldwide. Though considered as one of the best methods of long-acting, safe contraception, their administration can lead to several complications. A 30-year old para 2⁺⁰ 2 alive woman referred to do pelvic ultrasound on account of suspected missing IUD. The IUD was inserted 1 year earlier following her last delivery by caesarean section, which was performed for prolong labour. Pelvic ultrasonography did not demonstrate an IUD within the uterine cavity. However, sonographic evaluation of the urinary bladder revealed a linear echogenic structure measuring about 4.5cm in length partially traversing the anterior bladder wall, with an appearance suggestive of a migrated IUD. An abdominal radiograph revealed the IUD projected over the pelvic region. The migrated IUD was surgically removed by open cystotomy.

Keywords: Intrauterine Device, Migration, Urinary Bladder, Ultrasonography.

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INTRODUCTION

Intrauterine contraceptive devices (IUDs) are widely used method of reversible contraception worldwide. About 1.16 billion women of the reproductive age group between 15 and 49 years use IUD as a method of family planning [1]. Though considered as one of the best methods of long-acting, safe contraception, their administration can lead to several complications such as intermenstrual bleeding, menorrhagia, displacement, migration and pelvic pain. Migration into surrounding organs is a rare but severe complication. The incidence of IUD migration is reported to range from 0.1 to 0.9% [2, 3]. Approximately 80% of IUDs migrate into the peritoneal cavity after uterine perforation^{4,5}. We report a rare case of sonographic detection of a migrated IUD in the urinary bladder.

CASE REPORT

A 30-year old para 2⁺⁰ 2 alive woman referred to our department to do pelvic ultrasound on account of suspected missing IUD. The IUD was inserted 1 year earlier following her last delivery by caesarean section, which was performed for prolong labour. She presented to the family planning clinic for routine follow-up, during which vaginal examination revealed missing IUD strings. Other clinical history and physical examinations were unremarkable. Pelvic ultrasonography did not demonstrate an IUD within the uterine cavity. However, sonographic evaluation of the urinary bladder revealed a hypoechoic mass-like lesion along the anterior bladder wall. Within the lesion was a linear echogenic structure measuring about 4.5cm in length partially traversing the lesion and anterior bladder wall, with an appearance suggestive of a migrated IUD (fig. 1). An abdominal radiograph revealed the IUD projected over the pelvic region (fig. 2). A diagnosis of IUD within the urinary bladder with associated reactive granulation tissue formation was made. The migrated IUD was surgically removed by open cystotomy with excision of the surrounding granulation tissue from the bladder wall.

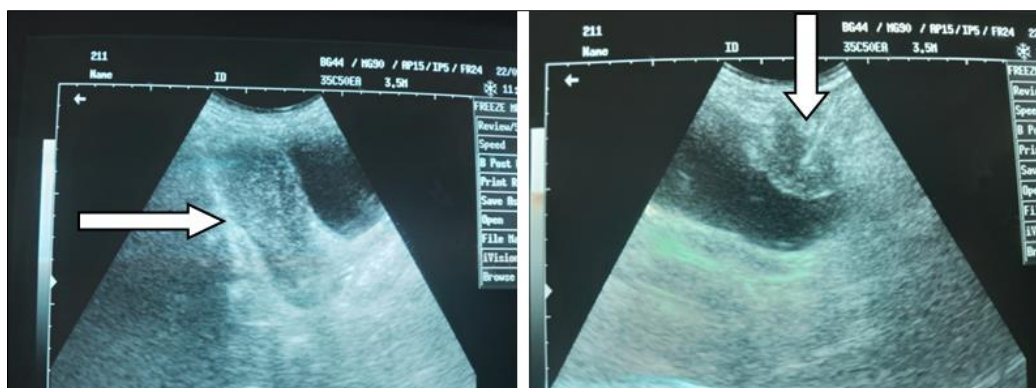


Figure 1: Sonograms of the pelvis showing an empty uterus (horizontal arrow). An IUD demonstrated as a linear echogenic structure within a mass like hypoechoic area in the anterior wall of the urinary bladder (vertical arrow)

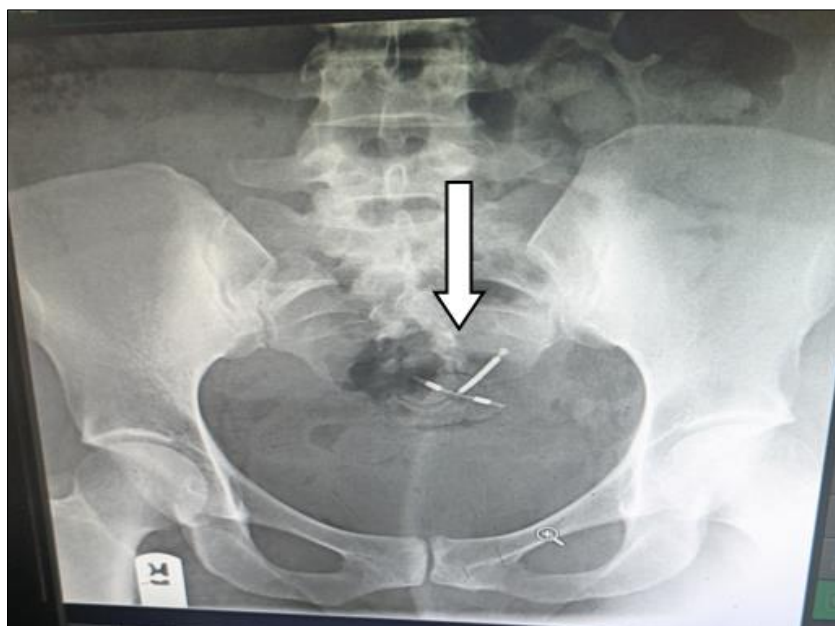


Figure 2: Anterior – Posterior view radiograph of the pelvis showing a ‘Copper T’ IUD projected in the pelvic cavity (arrow)

DISCUSSION

The common side effects associated with IUD usually occur within few months after insertion and include pain and irregular bleeding. Rarely, the IUD can be complicated by pelvic inflammatory disease, contraceptive failure, expulsion, perforation or migration as demonstrated in the index case [6, 7].

Uterine perforation and migration of the IUD into the pelvis or surrounding organs are severe complications [6]. After perforation, IUDs can migrate to any location, including the omentum, pouch of Douglas, or adherent to the sigmoid colon. Less commonly, IUDs can migrate into the urinary bladder, appendix, or intestine. The index case is migration of an IUD into the urinary bladder. The mechanism of uterine perforation by IUD is not well-understood; however, it is postulated that immediate perforation might occur during insertion of the device especially while using the metal uterine sound, which could perforate the uterus or

create a false track into which an IUD can be mistakenly inserted. It may also be a delayed gradual perforation as a result of erosions of the uterine layers [3-6].

The presentation of IUD migration varies depending on the site of migration and type of IUD. In asymptomatic patients, migrating IUDs may remain undetected for years [8]. In the literature, most reported cases of bowel and urinary bladder perforation were asymptomatic at the time of diagnosis. However, in some cases, the diagnosis may be made by the appearance of clinical features such as fever, dysuria, urinary frequency, diarrhoea or even serious complications such as haematuria, peritonitis or subacute intestinal obstruction [4].

Radiological examination is important in evaluating patient with missing IUD. The role of imaging is in confirmation of diagnosis of missing IUD and localization of the migrated IUD. Early abnormalities in the position of the IUD such as displacement can be

avoided by adjusting or removing it to avoid perforation. These abnormalities can be detected early by regular follow-up and imaging. Pelvic ultrasound is an effective method to detect IUD displacement [9]. Plain abdominal radiography and ultrasound are usually enough for the localisation of the migrated IUD in the pelvic organs such as the urinary bladder as demonstrated in this case. However, computed tomography and magnetic resonance imaging may be required when localization of IUD by former modalities failed.

Treatment options for IUD in the urinary bladder depend on the location and complications associated with it. They include endoscopic removal through cystoscopy, laparoscopic removal or open surgical removal [10, 11].

CONCLUSION

Migration of IUDs is a rare but serious complication. Migration may occur into the surrounding structures including the urinary bladder. Radiological evaluation is key to early detection in order to prevent further complications.

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