

Unrecognised perforation of the uterus into bladder by an IUD

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Introduction

Insertion of an intrauterine device (IUD) is one of the most commonly performed procedures in gynaecology practice (Anderson *et al.*, 1998). One potential disadvantage is the risk of uterine perforation, which occurs in less than 1.2/1000 insertions (Gruber *et al.*, 1996). Although most perforations occur during the insertion process, this complication can also occur with a previously inserted device (Pirwany and Boddyt, 1997). IUD perforation is a rare but serious condition, because it can involve the bladder or the gastrointestinal tract and may cause infertility due to adhesions (Andersson *et al.*, 1998). Perforation of the urinary bladder by an IUD is extremely rare (Sepulveda *et al.*, 1993). In this report we present a case of IUD perforation of the uterus into the bladder, the perforation not being recognized for 6 years.

Case report

A 21-year-old woman (para 2 + 0) was referred to a private clinic complaining of recurrent urinary tract infections and haematuria, increased urinary frequency and lower abdominal pain after her

second delivery. Her medical and gynaecological history were uneventful. She volunteered that 6 years ago, an IUD had been inserted by a gynaecologist. One year later, she conceived spontaneously. When the tail of the IUD was not located by vaginal examination, it was assumed that the device had been expelled. Although the IUD strings were not detected during examination, nothing was said to the patient and no further attempts were made to confirm the IUD location.

The patient was advised to continue with her pregnancy. The pregnancy and delivery were uncomplicated. After that time she frequently developed urinary infections. Urinalysis showed numerous red and white blood cells but other laboratory findings were normal. Intravenous pyelography revealed an IUD in the pelvis (Figure 1). Because there was a history of IUD insertion without confirmation of expulsion, pelvic sonography was performed to confirm the site of the device. An IUD (copper T) was seen to the right of the bladder surrounded by a hypoechoic and ovoid image at the end of IUD. This image resembled the tail of an IUD (Figure 2). Changing the patient's position did not alter the position of the device in relation to the bladder. The reason proved to be adhesion formation. These findings were confirmed by cystoscopy.

As the IUD could not be removed by cystoscopy it was removed by laparotomy and cystostomy.



Figure 1. IVP demonstrating an IUD in the right side of the pelvis or bladder.

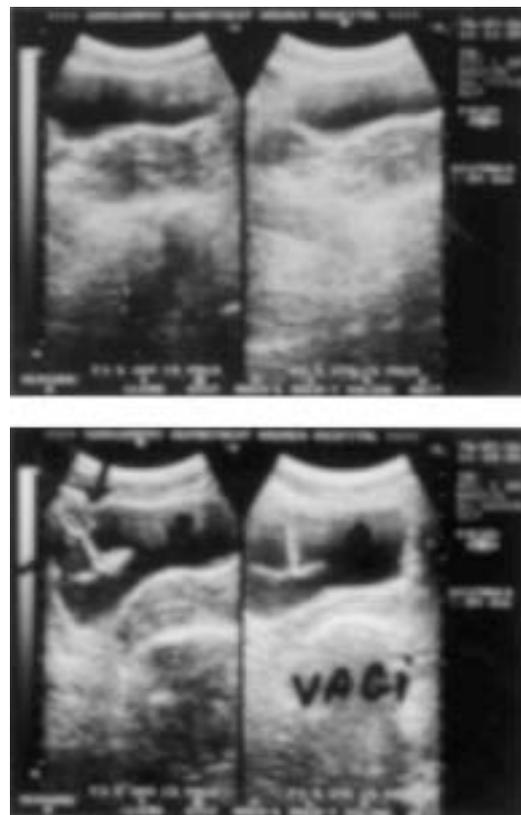


Figure 2. Pelvic ultrasonography confirmed an IUD in the right side of the bladder.

Discussion

Failure to locate the strings of an intrauterine device may indicate that the device has been expelled or has been dislocated inside the uterine cavity or, worst of all, has perforated the uterine wall.

Perforation usually occurs at the time of insertion of a new device, particularly in the puerperium, but it can also occur during the puerperium if a pre-existing device is not removed in early pregnancy or extruded at the time of delivery (Gruber, 1996; Pirwany, 1997). In our case, as the pregnancy was entirely uneventful and the risk of perforation in lactating women is higher, perforation probably occurred during the puerperium.

Our case demonstrates a sequence of errors made in the investigation of a missing IUD and should serve as a warning to practitioners and patients alike (Andersson *et al.*, 1998). If the device is not localised and removed, severe intra-abdominal complications such as perforation of the urinary bladder, infertility due to adhesions, perforation of the rectosigmoid colon, the small bowel, the appendix or even uterine myoma may ensue. Our case demonstrates one such complication (Sepulveda, 1993; Gruber, 1996; Andersson, 1998).

A gynaecologist faced with the problem of a missing device should never fail to inform the patient of the situation (Gruber *et*

al., 1996). The location of the IUD, whether intrauterine, extrauterine or outside the body altogether (by expulsion), must always be confirmed even if the woman is pregnant. The possibility of perforation should always be considered.

This report demonstrates the need to investigate with care every case of a missing IUD with or without pregnancy.

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Uterine perforation and laparoscopic retrieval of a levonorgestrel intrauterine system (Mirena[®])

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Introduction

The levonorgestrel intrauterine system (Mirena[®] IUS, Leiras Oy, Yurku, Finland), marketed in the United Kingdom from the mid/late 1990s, is now used widely for both contraception and the treatment of idiopathic menorrhagia. It is estimated that over 120 000 units are inserted annually (personal communication). Complication rates are minimal and because of its physical nature, uterine perforation is rare. A MEDLINE search from 1966 until the present time revealed only one case report of Mirena[®] uterine perforation. Health-care providers are trained and certified before inserting the intrauterine system. We report a case of uterine perforation and subsequent laparoscopic retrieval of a Mirena[®] IUS.

Case report

Mrs PN was a 44-year-old para 1 with a history of a previous caesarean section. She presented to the gynaecology clinic with complaints of irregular and heavy periods and a vulval itch. She had been treated in the past with tranexamic and mefenamic acids with no relief of her symptoms. Complete blood count and a pelvic ultrasound scan were normal. Following discussion, she was willing to have a Mirena[®] intrauterine system fitted. This was inserted under general anaesthesia after a normal hysteroscopy and vulval biopsy to investigate her abnormal uterine bleeding and vulval symptoms.

She was subsequently followed-up and discharged 6 months later when she reported satisfactory improvement in all her symptoms. However, she was referred back by her general practitioner (GP) 9 months after the Mirena[®] insertion with complaints of intermittent pelvic pain. Further, her bleeding symptoms had returned. The GP



Figure 1. Hysteroscopic view of the uterine cavity. Scar of fundal perforation arrowed.

could not see or feel the threads and a pelvic ultrasound scan did not demonstrate the Mirena[®] IUS in the uterine cavity. She was certain that the Mirena[®] IUS had not been expelled.

She subsequently had a diagnostic hysteroscopy where a fundal perforation, indicated by a well-defined scar, was noted (Figure 1).