

Case report

Transmural migration and perforation of a levonorgestrel intrauterine system: a case report and review of the literature

Carrie Anne Ferguson^{a,*}, Dustin Costescu^b, Mary Anne Jamieson^c, Lisa Jong^d

^aContraception Advice Research and Education Fellowship, Department of Obstetrics and Gynaecology, Queen's University, Kingston, ON, Canada K7L 3N6

^bDepartment of Obstetrics and Gynaecology, McMaster University, Hamilton, ON, Canada L8S 4L8

^cDepartment of Obstetrics and Gynaecology, Queen's University, Kingston, ON, Canada K7L 3N6

^dDepartment of Radiology, Queen's University, Kingston, ON, Canada K7L 3N6

Received 28 May 2015; revised 24 August 2015; accepted 25 August 2015

Abstract

Introduction: Uterine perforation is an uncommon yet well-known complication of copper intrauterine devices and the levonorgestrel intrauterine system (IUS). While initial extrauterine placement at the time of insertion is felt to be the cause of perforation in most cases, some hypothesize that delayed transmural migration and subsequent perforation can occur with slightly malpositioned or even properly placed devices.

Case: A 46-year-old female had a 52-mg levonorgestrel IUS inserted for menstrual management and contraception. We arranged a follow-up ultrasound as the uterus was enlarged on bimanual examination and the cavity sounded to 11 cm. This ultrasound was completed 6 days after insertion and reported the IUS to be in the “upper uterine cavity”. Over time, transmural displacement and perforation of the horizontal arms of the device occurred. Computed tomography scans performed over 2 years for nongynecologic indications document this gradual migration. A retrospective review of initial ultrasound images showed no evidence of uterine defect, embedment or perforation but the cavity length did appear to be less than 11 cm.

Conclusions: While initial extrauterine placement at the time of insertion is the most common mechanism of perforation, delayed transmural migration is another mechanism that can occur.

© 2016 Elsevier Inc. All rights reserved.

Keywords: Intrauterine system; Intrauterine device; Uterine perforation; Migration; Embedment

1. Introduction

Intrauterine contraception is a highly effective method of pregnancy prevention. In Canada, two types of devices are available: the copper intrauterine device (IUD; various products) and levonorgestrel intrauterine system (IUS; 52 mg and 13.5 mg). These devices provide 99.2% and 99.8% efficacy at pregnancy prevention, respectively [1], and both types have high rates of acceptability across the reproductive lifecycle for contraception [2,3]. Aside from contraception, the 52-mg IUS is indicated for treatment of menorrhagia but is also often prescribed off-label for many other gynecological pathologies [4–6]. Common complica-

tions from IUD/IUS insertion include failed insertion, pain, vasovagal reactions, infection, menstrual abnormalities and expulsion [7].

Although uncommon, uterine embedment (whereby the IUD/IUS is located in the myometrium) and perforation (where any or all of the IUD/IUS is located beyond the uterine serosa) occur in approximately 1 in 1000 insertions [8,9]. Risk factors for uterine perforation include breastfeeding, postpartum amenorrhea, ≤ 6 months postpartum and provider inexperience [9,10]. Symptoms of embedment and/or perforation range from asymptomatic to severe abdominal pain and abnormal vaginal bleeding [11–13]. Very rarely, distant intraabdominal migration occurs and may result in injury to various pelvic and abdominal structures [14,15].

Here, we present a case of a woman who experienced progressive transmural migration of an IUS reported to be intracavitary immediately after insertion. Serial computed tomography (CT) scans performed for nongynecologic indications document this migration.

* Corresponding author. Tel.: +1-613-542-9473; fax: +1-613-533-6779.
E-mail address: carrie.ferguson@queensu.ca (C.A. Ferguson).

2. Case report

A 46-year-old gravida 1, para 1 female was seen in clinic for contraceptive counseling and menstrual management. Her medical history included AIDS, visual impairment, vasculitis requiring chronic corticosteroid use, osteoporosis, obstructive sleep apnea, nephrolithiasis and migraine headaches. She was a long-time user of depot medroxyprogesterone acetate but desired an alternate method due to osteoporosis. She had been counseled on an IUS 4 years prior and was now willing to consider this method. Hygiene and management of menstrual blood flow in this visually impaired patient was difficult and the goal was to maintain the amenorrheic state attributed to depot medroxyprogesterone acetate.

In accordance with the recommended sterile technique as per product monograph, we inserted a 52-mg levonorgestrel IUS (Mirena[®], Bayer AG). The uterus was enlarged on bimanual examination and sounded to 11 cm. We were successful with inserting the IUS on the first attempt and the patient tolerated it well. Given the somewhat atypically large sound measurement, we arranged an ultrasound that reported the IUS to be in the “upper endometrial cavity” (see Fig. 1 and Discussion).

The patient was subsequently followed by the urology service for recurrent cystitis, renal colic and nephrolithiasis and therefore had serial imaging that often included views of the pelvis. A CT scan 20 days after insertion commented that the IUS was “within the uterus [with] the proximal portion seen to be protruding into the myometrium” (Fig. 2). Sixteen months after insertion, the patient was reimaged due to suspected pyelonephritis. CT of the abdomen and pelvis reported only that the “uterus projects to the right of midline containing an IUCD”. Repeat CT scan 18 months postinsertion (misleadingly) noted that the “IUD is in place” (see Fig. 3, images and caption). We saw the patient in Gynecology Clinic that same month and strings were present on vaginal examination. Neither the patient nor gynecologist was aware of radiographic images/reports related to the IUS position. Interestingly, at that time, the sight-impaired patient had thought that she was having frequent vaginal

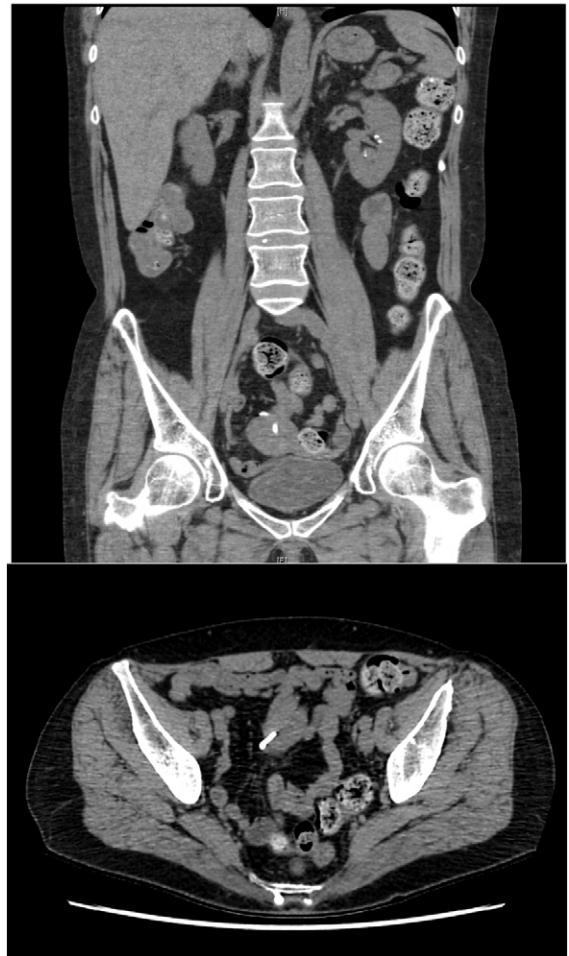


Fig. 2. CT scan demonstrating perforation of a levonorgestrel IUS, 1 month following insertion. IUS is seen protruding into myometrium with a portion of the device perforating the uterus.

bleeding but she was found to have marked urethral prolapse likely from repeated valsalva due to bladder irritability and infection. The subsequent diagnosis of menopause more than 2 years later likely explains her vulnerability to urethral prolapse.

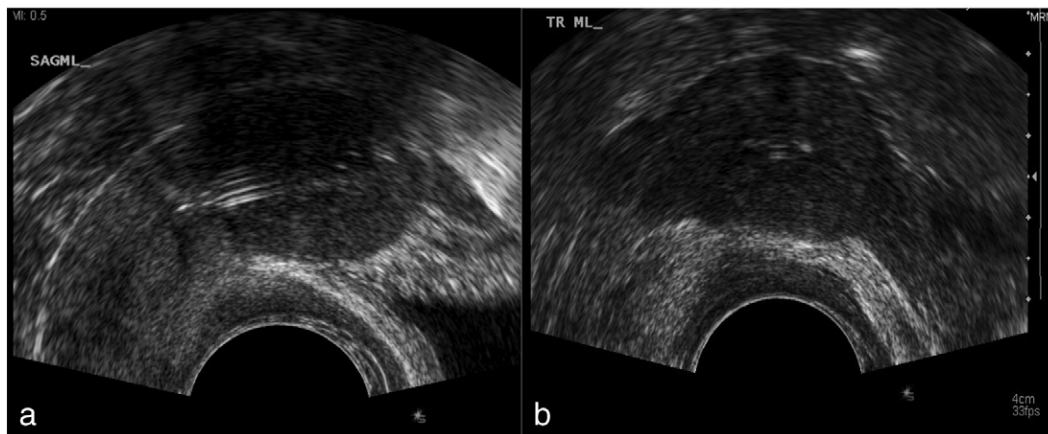


Fig. 1. Intrauterine placement of an IUS in a woman who experienced subsequent uterine perforation in (a) sagittal midline to view shaft and (b) transverse midline view to show horizontal (top of “T shape”) aspect of device at fundus.

Download English Version:

<https://daneshyari.com/en/article/6170663>

Download Persian Version:

<https://daneshyari.com/article/6170663>

[Daneshyari.com](https://daneshyari.com)