CASE REPORT

The lost intrauterine device: removal by hysterectomy

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Abstract

A case of migration of an intrauterine device (IUD) deep within the endometrium, presenting as heavy vaginal bleeding and abdominal pain, is discussed. The IUD had been in situ for 31 years. Standard retrieval techniques failed and removal necessitated hysterectomy. The complications of 'lost IUDs' are discussed and the need to enquire about removal in all women on approaching the menopause is emphasised.

Case report

A 55-year-old woman presented to the gynaecology outpatients department with an 8-month history of painful vaginal bleeding since commencing hormone replacement therapy (HRT). She had an intrauterine device (IUD) in situ that had been inserted some 31 years previously.

On speculum examination the IUD threads were not visible, and simple retrieval failed. HRT was stopped and hysteroscopy, curettage and removal of the IUD were arranged, under general anaesthesia. At hysteroscopy the IUD was not seen within the cavity, and the curettings were unremarkable. An X-ray reported that the IUD was sited 'within the pelvis'.

On review 1 month later the patient was well and reported no further bleeding or abdominal pain. In view of this fact she was not keen to pursue further surgery. However, because of severe vasomotor symptoms she was recommenced on HRT.

At review 3 months later, however, the patient reported unacceptable vaginal bleeding and abdominal pain following the recommencement of HRT. It seemed possible that the lost IUD was actually lying deep within the endometrium, provoking a reaction within the endometrium and the symptoms described. This possibility was discussed with the patient who opted to undergo hysterectomy.

Surgery was undertaken. Following hysterectomy the removed uterus was dissected. The IUD was located deep within the endometrium as anticipated (Figures 1 and 2). The patient made an uneventful recovery and was commenced on oestrogen-only HRT. At review 2 months later she was well.

Discussion

An IUD is a safe, effective and economical method of contraception, used by more women worldwide than any other reversible method of birth control.¹

Longer-term use of IUDs may be associated with problems. An IUD that remains in situ beyond the menopause can cause both vaginal bleeding and difficulties in removal, as the present case clearly demonstrates.

Bleeding problems can be due to erosions of the surface epithelium and micro-thrombosis in the underlying endometrial capillaries. The perimenopausal endometrium is at increased risk.²

Bleeding may also occur because the IUD evokes both acute and chronic inflammatory responses within the endometrium.³ It has been postulated that, over a prolonged period, this same inflammatory response could predispose to endometrial carcinoma (akin to chronic irritation and vulval carcinoma). The available data are, however, for the most part reassuring, suggesting even a possible protective effect. This may be either through the generation of an inflammatory response, which leads to early elimination of hyperplastic epithelial cells, or more complete shedding of the epithelium in the first place.⁴

There are several reasons why removal of IUDs can prove difficult. Following longer-term insertion, concretions, corrosions and thinning of the plastic can occur. In addition, there may even be fragmentation of the device.² Alternatively, there tends to be entrapment and embedding secondary to shrinkage of the endometrial

Figure 1 Photograph showing the original position of the intrauterine device deep within the endometrium

Figure 2 Photograph showing the intrauterine device following partial removal

cavity and atrophy of the endometrium.⁵ As a consequence the IUD is pulled upwards, the threads can disappear and the IUD is apparently 'lost'.

When the threads of an IUD are not visible, ultrasonography has been recommended to establish the location of the IUD within the uterus. However, a study by Reiertsen confirmed that whilst reliable in detecting IUDs in utero, ultrasonography is not helpful in detecting cases of penetration into the uterine wall.⁶

If routine retrieval methods fail, for the reasons alluded to previously, then most 'apparently lost' IUDs can be both located and then simply and safely removed using hysteroscopic aid.⁷ Nevertheless some instances, as the present case illustrates, require more extensive surgery.

Currently the evidence would appear to suggest that IUDs are, for the most part, safe and indeed perhaps beneficial, beyond their contraceptive use, in the short to medium term. However, bleeding and removal difficulties do occur and would logically seem to be a function of time and/or hormone deprivation. It is important as practitioners inserting IUDs that we enquire about their removal. Generally removal is recommended 1 year following the menopause if this occurs after the age of 50 years, and 2

years after the menopause if this occurs before the age of 50 years. It will be interesting to see if these complications will be seen more commonly with the increasing use of the Mirena® intrauterine system as part of the hormone replacement process.

Statements on funding and competing interests

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CASE REPORT

Intrauterine fragmentation of Gyne T380®: an uncommon complication

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Abstract

A case of intrauterine fragmentation of a Gyne T380® intrauterine device (IUD) is described that was detected during removal of the device. Pelvic ultrasound failed to detect the fragment. Subsequently the woman reported spontaneous expulsion of the device. A description of this uncommon complication of IUD use, diagnosis, management and the need for awareness of the possibility of spontaneous expulsion of the fragment are discussed.

Case report

A 30-year-old woman attended our contraception advice clinic in March 2003 for removal of her intrauterine device (IUD) because she wanted to conceive.

A Gyne T380® IUD (Janssen-Cilag) was inserted in August 2000 on Day 7 of the patient's menstrual cycle without any difficulty. The IUD threads were in situ at her 6-week and annual checks.

The patient did not have any unacceptable alteration in her menstrual cycle and she did not have dysmenorrhoea. Overall she was very happy with this contraceptive method.

She had one child born in 1995 by spontaneous vaginal delivery at term. She had no medical or surgical history of significance.

When removal of the IUD was attempted a fragment of

the transverse arm of the IUD was found to be missing (Figure 1). A pelvic ultrasound scan failed to locate the missing fragment. While the patient was waiting for a diagnostic hysteroscopy she reported spontaneous expulsion of the fragment during her menses.

Discussion

Although the Gyne T380 IUD is no longer available, some women may have the device in place until 2009. The manufacturer's medical information department have confirmed that there have been no reported cases of fragmentation of Gyne T380 devices during their removal. The literature includes reports of this complication in Multiload® Cu250 device users^{1–3} and one case report in a Lippes® loop user.⁴

Although shedding of the copper wire is not uncommon in long-term IUD users, intrauterine fragmentation of the IUD frame is a rare complication. Fragments of IUDs have been observed to remain in the uterus after removal. This situation can result in perforation of the uterine muscle, migration into the abdominal cavity, and an increased risk of infection if the fragment perforates the intestine.⁵ Sonography, X-ray and computed tomography are not always successful in identifying the fragment and depend on the location of the fragment and the presence or absence of X-ray contrast. In this situation hysteroscopy is indicated