In both cases, when the removed IUS was re-examined, it became apparent that the entire device had been removed from the uterine cavity. The arms were still attached to the main stem of the IUS. The hormone release capsule, usually situated at the base of the vertical stem, had migrated up the shaft, trapping the arms and bringing them together in the midline, making it appear as if they had been detached (Figure 1). The majority of IUS are removed without difficulty. There are no published cases of IUS arms becoming detached. However, an intrauterine-retained hormone release capsule following IUS removal has been documented.1

The common theme in the two patients described above and Forrest et al.’s patient1 is difficult retrieval of the device requiring more traction on the threads than normal. This presumably led to the hormone capsule being dislodged, either migrating up the device and getting stuck covering the arms or becoming detached altogether. Clinicians should always check IUS devices after removal. They should also be aware that after a difficult removal the capsule can migrate and obscure the arms but the device remains complete. Knowledge of this possibility will prevent patients being subjected to unnecessary investigations and interventions to find ‘missing’ IUS arms and for appropriate investigations and interventions when the capsule has detached.

The whole of the IUS device is radio-opaque and can be located with either X-ray or ultrasound.2 Transvaginal ultrasound is the first-line investigation because it provides the best images to help determine whether or not the IUS is correctly sited within the uterus. The vertical stem of the IUS is visualised in the sagittal plane with multiple reflective parallel planes and in the axial plane as a single echogenic focus.3 In view of this difficulty abdominal X-ray would confirm whether or not the horizontal arms of the IUS were within the pelvis. This would be useful, especially prior to embarking on hysteroscopic investigation.

We would like to thank the opportunity to respond to Dr Torbe et al.’s letter.1 Extremely rare, isolated case reports of hormone cylinder dislocations in the Mirena® intrauterine system (IUS) similar to the ones described by the authors have been received by the company’s Pharmacovigilance and Quality Assurance Unit. The company’s investigations have shown that these cases could not be attributed to a quality defect of the product. Difficult removal has been found as the underlying cause, and no further adverse effect in the Mirena user are mentioned in the majority of cases.

To make physicians aware of this extremely rare situation, and to avoid unnecessary interventions in search of ‘missing’ Mirena arms, the company has recently introduced the following statement into the Product Information for Mirena: “After removal of Mirena®, the system should be checked to be intact. During difficult removals, single cases have been reported of the hormone capsule sliding over the horizontal arms and hiding them together inside the cylinder. This situation does not require further intervention once completeness of the IUS has been ascertained. The knobs of the horizontal arms usually prevent complete detachment of the cylinder from the T-body.”

Implementation of this statement into the local product information is currently ongoing in all countries where Mirena® is marketed, and it was submitted at the beginning of December 2008 to the Medicines and Healthcare products Regulatory Agency (MHRA) to be implemented in the UK.

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Reference

Serious morbidity with long-term IUD retention

We have recently encountered four patients with serious intraperitoneal sepsis over an 18-month interval (2007/2008). Each was associated with long-term retention of a copper intrauterine device (IUD), which was identified as the likely source of infection. The IUDs had been in situ for 8, 15, 18 and 20 years, respectively. Three women were several years into their menopause. All four women presented as systemically unwell with a complex pelvic mass. One had uterine obstruction at the site of the abscess, simulating gynaecological malignancy. In all cases laparotomy was technically difficult owing to the inflammatory pelvic mass adhering to bowel. Intermediate or prolonged hospitalisation resulted and, without intervening care, two of the women would probably have died.

Pelvic actinomycosis was reported in the two patients’ histology. Cultures of frank pus grew Actinomyces sp in pure culture. Actinomyces-like organisms (ALOs) had been reported on one smear of the fourth woman. In 2004 she had undergone appendicectomy, which showed...
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severe subserosal inflammation without mucosal inflammation leading to the conclusion that the source was elsewhere within the abdomen or pelvis. It is speculative that this episode 4 years earlier might have been related to the long-term presence of her IUD. Pelvic actinomyces normally begins as subacute or chronic disease, months or years before presentation.1

intraperitoneal sepsis in a single hospital in a 1-year period. The number of women in the catchment area of this hospital who were using an IUD and had a pelvic mass or endometriosis with positive Gram staining or a pelvic mass is not known. However, the number of women in this hospital with pelvic masses is probably similar to other large hospitals. Such findings would support the occurrence of a cluster of cases of serious pelvic infection described by Pillai et al.1 The Clinical Effectiveness Unit (CEU) acknowledges that there was a cluster of serious pelvic infection described by Pillai et al.1 The Clinical Effectiveness Unit (CEU) acknowledges that there was an increase in the number of women with pelvic masses or endometriosis with positive Gram staining or a pelvic mass. The CEU recommends that, based on expert opinion, the risk of infection in the 20 days following replacement of an IUD outweighs the risk of extending use until the menopause. In this situation, the IUS should be removed no later than 1 year after the last menstrual period (LMP), or 2 years after the menopause if the LMP occurs under the age of 50 years.2

Intraterine inconvenience also normally reside in the female genital tract.1

We cannot provide any denominator data for the number of women in the catchment population with a long-term IUD, but the occurrence of a cluster of cases of serious interperitoneal sepsis in a single hospital in a relatively short space of time is unusual. It is likely that single cases are not reported, or the association with the copper IUD overlooked, by surgeons and not fed back to those providing contraception services. When a pelvic mass or abscess, fever and other signs of infection are found in patients with a long-term IUD, pelvic actinomyces should be considered. Awareness of this could usefully be increased among general surgeons and gynaecologists. We recommend that current guidelines be revised to include some emphasis on the importance of timely removal of an IUD, once its contraceptive properties are no longer required. Women should be made aware that long-term retention may rarely result in serious problems with pelvic actinomyces and/or actinomyces. There should be more emphasis on timely removal of an IUS early in the menopause. This is not included in existing professional guidance3 and patient information leaflets.5

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References


3. IUS producing a TAC

Recently I saw a very unusual patient in whom an intrauterine system (IUS) appeared to produce a trigeminal autonomic cephalgia (TAC). The patient, a 39-year-old woman, was fortunate not to have had a headache until the events reported here. In early 2007, the patient started to complain of severe menorrhagia. Her periods were heavy and lasted for 14 days, and necessitated the use of 15–20 sanitary pads a day. Tranexamic acid 1000 mg qds was tried initially for 8 weeks but the heavy bleeding continued. Next, a copper-releasing IUS was inserted in 5 tds was tried for many months resulting in a mild improvement. In desperation, the patient was referred to a gynaecologist who felt that the next step was to insert a levonorgestrel-releasing IUS. This was duly done. Within 6 hours of inserting the IUS the attacks started. All the patient’s attacks (averaging 5–7 attacks/day) were similar. All were left-sided and associated with severe nausea and vomiting. An attack started with pain to the side of the left eye that the patient described as unbearable, like the worst toothache ever. Associated with the pain was pain to the side of the left eye, although the pain was so bad the patient also cried with right eye. Her palmpal fissure narrowed, her nose ran and her eye became pink. Her face felt strange and numb though painful. Touching her face, or brushing her hair or teeth, did not trigger an attack. The attacks continued daily for 4 weeks until the patient came to see me.

As she entered the room, an attack started. Following the attack I removed the patient’s IUS very easily and gave her a zolmitriptan nasal spray. In case she had not been told to see her 7 days later, at which time she appeared to be a completely different person. She had suffered one further attack some 6 hours after the IUS was removed and the nasal spray. After this her attacks had totally stopped. At that clinic visit, in order to help her menorrhagia, which still raged, I started the patient on norethisterone again. Eighteen months later she is still totally free of attacks, and although her bleeding is still very heavy, she is not prepared to even consider allowing me to reininsert an intrauterine device/system, with or without hormones. She says the pain was the worst pain she could ever imagine and as a result she would never, even for the purposes of research, have an IUS inserted again.

This woman appeared to develop a TAC, which approached most closely to a cluster headache. In a case she had had over many months, she had an IUS inserted and developing a TAC, which was rapidly cured by removing the device. I would be delighted to discover if any of the Journal’s readers have observed a similar case.

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Informed consent for IUD fitting

Perforation of the uterus is a rare complication of intrauterine device (IUD) fitting. It is quoted as occurring in up to 2 in 1000 IUD fittings.1 Risk factors for perforation include previous caesarean section and postpartum insertion up to 6 months after delivery. Perforation may occur during the sounding of the uterus or the device itself may perforate the uterus. This can lead to the device being free in

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