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References

Missing IUS arms?

We want to describe a couple of cases that serve to demonstrate that the hormone capsule of the Mirena® intrauterine system (IUS) can dislocate during removal thus changing its appearance. As a result, careful examination of the device is required to prevent further unnecessary investigation.

A 58-year-old woman presented to her general practitioner for removal of a Mirena IUS as it was no longer required. It had been inserted at the practice 7 years previously to provide the progesterone component of her hormone replacement therapy.

At the time of removal the cervix and the IUS threads were visualised. More traction than usual was required on the threads to remove the device. On inspection it appeared that the horizontal arms had become detached as they were not evident and the vertical main stem of the IUS had been removed with the hormone release capsule attached.

The patient was asymptomatic and was allowed home. A transvaginal ultrasound scan transmitted infections: a probability survey. Lancet 2003; 365: 1246–1255.

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 become detached; the long stem of the device had migrated up the shaft, trapping the arms 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.3

The common theme in the two cases described above and Forrest et al’s patient 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 altogether.

The whole of the IUS device is radio-opaque and can be located with either X-ray or ultrasound.3 Transvaginal ultrasound is the first-line investigation and reduces 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

However, in the cases reported here the vertical stem was seen in the uterus unless it is possible to obtain a coronal view.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.

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Figure 1 The intrauterine system (IUS) shown in the upper part of the photograph has an abnormal appearance. The IUS in the lower part of the photograph has a normal appearance

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 abscesses, 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 intervention, two of the women would probably have died.

Pelvic actinomycosis was reported in the two patients’ histology. Cultures of frank pus grew Actinomyces spp in pure culture. Actinomyces-like organisms (ALOs) had been reported as causing the female. 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 caused by the long-term presence of her IUD. Pelvic actinomycosis normally begins as subacute or chronic disease, months or years before presentation.

Intrauterine devices marketed in the UK have licensed durations of 5, 8 or 10 years. In women aged under 40 years it is recommended they are changed according to licence. If inserted after the last menstrual period (LMP) may remain in situ until 1 year after the menopause if the last period (LMP) is over the age of 50 years, or 2 years after if the LMP is under the age of 50 years. These recommendations are based on expert opinion and acknowledge that insertion-related risks are minimised by reducing the frequency of IUD changes. National guidance places strong emphasis on when removal is safe from a contraceptive point of view.1 There is no clear mention of the need for removal once the contraceptive action is no longer required, or of the risks of failing to do so. The frequency for the first 3 years of use.

We cannot provide any denominator data for the proportion of women in the contraceptive population with a long-term IUD, but the occurrence of a cluster of cases of serious intraperitoneal 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 actinomycosis 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 complications with pelvic actinomycosis and/or actinomycosis. There should be more emphasis on timely removal of an IUD early in the menopause. This is not included in existing professional guidance2 and patient information leaflets.3

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References

IUS producing a TAC
I recently 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 never 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 was tried initially for 8 weeks but the heavy bleeding continued. Not the contraceptive tablet or progesterone only pill 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 long-acting IUS and IUD.

This was done without of inserting the IUS the attacks started. All the patient’s attacks (averaging 5–7 attacks/day) were similar. All were left sided and were of usual duration. 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 tearing and conjunctival injection, pain down the side of the left eye, although the pain was so bad the patient also cried with her right eye. Her palpbral 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 zolmitrine nasal spray. In case this did not work I arranged 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 had received a zolmitrine nasal spray. After this her attacks had totally stopped. At that clinic visit, in order to help her menothritis, 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 insert 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 approximated most closely to a cluster headache. This case highlights the importance of missing the trigger for an attack. In TAC, attacks often start with a trigger, which may be a complex of environmental and/or psychosocial factors. In such cases it is important to try to remove or reduce the trigger. In this case, I was not able to identify any trigger, and I am not sure if the IUS had any such effect. The attacks are so severe that I am not sure if IUS removed immediately would have reached a high level after only 6 hours. Conversely, if the problem were the hormone in the IUS, its removal would be unlikely to cause the hormone level to decrease significantly in 6 hours.

In summary, on the face of it this would appear to be a simple case of a woman having an IUS inserted and developing a TAC, which is 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 1 in 2000 IUD insertions.2 Risk factors for perforation include previous caesarean section and postpartum insertion up to 6 months after delivery.3 Perforation may occur during the sounding of the uterus or the device itself may perforate the uterine. This can lead to the device being free in...