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 dislodge during removal thus changing its appearance. As a result, careful examination of the device is required to prevent further unnecessary investigations.

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 were found to be adherent. 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 no longer evident on the vertical main stem of the IUS. It had been removed with the hormone release capsule attached. The patient was asymptomatic and was allowed to go home. A transvaginal ultrasound scan was performed on an outpatient basis. The scan demonstrated echogenic specks at either end of the endometrium in longitudinal section, and in cross-section they were noted within the lateral walls of the uterus. It was queried whether these represented the arms of the IUS. The patient was then referred to the gynaecology department, for consideration for operative hysteroscopy to remove the retained arms.

A 50-year-old woman presented to the colposcopy clinic with moderate dyskaryotic smear. She had undergone a previous laparoscopic procedure to remove an IUS. A double loop excision of the transformation zone (LEEP procedure) for cervical intraepithelial neoplasia (CIN) with complete excision at each. On this occasion colposcopy examination was limited because of unsatisfactory views of the squamo-columnar junction. It was decided the patient would have a further LLETZ treatment with removal and reinsertion of the Mirena IUS under general anaesthesia. At the time of the procedure it was noted that the IUS threads were visible and the internal cervix was os. Again more traction than usual was required on the threads to remove the device. On inspection it was thought that the arms had become detached; the long stem of the device with the hormone release capsule present was attached to the threads. A saline hysteroscopy was therefore performed to locate the IUS arms. Good views of the entire cavity failed to demonstrate the presence of IUS pieces or perforation. The LLETZ procedure was performed and a new IUS inserted. The patient underwent an uneventful post-operative recovery.

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. It is an effective tool that 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 However, in the cases reported here the vertical stem was missing. Horizontal arms are rarely seen in the uterus unless it is possible to obtain a coronal view.¹ 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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References
2. Schering. Contra-indications, warnings, etc. Mirena® Information for the Patient: “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.”

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 interventional 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 the 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 heavy and from the long-term presence of her IUD. Pelvic actinomycosis normally begins as subacute or chronic disease, months or years before presentation.

A pelvic mass in women aged under 40 is now considered to be a common cause of pelvic actinomycosis.3 ALOs are more common with certain types of IUD6 and uncommon with the levonorgestrel intratubal system.4 Pelvic actinomycosis is an uncommon and poorly understood condition, but has been recognised to complicate IUD use since the first report in 1973. However, Actinomyces also normally reside in the female genital tract.2

We cannot provide any denominator data for the number of women in the cohort population with a long-term IUD, but the occurrence of a cluster of cases of serious intrauterine 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 timeliness of 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 infection with pelvic actinomyces 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.5

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References

1. Pillai M, Van de Venne M, Shefras J. Serious morbidity with long-term IUD retention [Letter], J Fam Plann Reprod Health Care 2009; 35: 35-36. 2. Faculty of Sexual and Reproductive Healthcare Clinical Effectiveness Unit (CEU) and Consultant in Sexual and Reproductive Health, Sandwell, Birmingham. E-mail: louise.melvin@gcc.scot.nhs.uk

Intrauterine Contraception

Intrauterine ContraceptionNov07.pdf [Accessed 10 August 2009].


IUS producing a TAC

I recently saw a very unusual patient in whom an intrauterine system (IUS) appeared to produce a trigeminal autonomic cephalalgia (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 qds was tried initially for 8 weeks but the heavy bleeding continued. Not being a typical user of copper IUD, it was tried for many months resulting in a mild improvement. In desperation, the patient was referred to a gynaecologist that felt that the next step was to insert a long-acting progestrenerelasing 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 her left hand and face continued to be congested. 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 paraesthesia and numbness of the left eye, although the pain was so bad the patient also cried with her right eye. Her palpatub 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 further attacks. 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 no further attacks. After this her attacks had totally stopped. At that clinic visit, in order to help her menstruation, 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 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. However, she did not have the fear that the attacks may be 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

Peroration of the uterus is a rare complication of intrauterine device (IUD) fitting. It is quoted as occurring in up to 2/1000 insertions.1 Risk factors for perforation include previous caesarean section2 and postpartum insertion up to 6 months after delivery.2

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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