In both cases, when the removed IUS was re-examined, it became apparent that the entire device had been removed from the uterus cavity. The arms were then 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.

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 was probably 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. 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. 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. In this view of the 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.

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 intense gynaecological care, 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 all patients. Actinomyces-like organisms (ALOs) had been reported on the hysteroscopic smear of the fourth woman. In 2004 she had undergone appendicectomy, which showed

References

Reply
We would like to take the opportunity to respond to Dr Torbe et al.’s letter.

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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 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 progestogen component of her hormone replacement therapy.

At the time of removal the cervix and the IUS were both found to be displaced. 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 was performed as an outpatient basis. The scan demonstrated echogenic specks at either end of the endometrium in longitudinal section, and in coronal section 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 of operative hysteroscopy to remove the retained arms.

A 50-year-old woman presented to the colposcopy clinic with moderate dyskaryotic smears. She had undergone two previous hysteroscopic loop excision of the transformation zone (LLETZ) procedures 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 as well as 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.

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Reference
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 due to the long-term presence of her IUD. Pelvic actinomyces normally begins as subacute or chronic disease, months or years before presentation.1

The copper IUD 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 age 40 this 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.2 These recommendations are based on consensus 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.3 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 with which this occurs is not clear.1

We cannot provide any denominator data for the number of women in the UK at any time who are using an IUD, or the number of women who have had long-term IUD use. The figures we can provide are from those patients who present to my gynaecology clinic with vaginal discharge and an IUD that had been in situ for 30 years. The threads of the IUD were visible and the patient had attended her GP practice after the menopause for cervical smear tests. She claimed that she had asked the practice nurse about removal of the IUD but had been reassured that it was not necessary.1

It is not clear how many IUD users retain their IUD after the menopause and what proportion of these women develops complications. However, the cases described by Pillai et al.2 highlight the potential for life-threatening infection and a lack of awareness of the need for IUD removal among some IUD users and health professionals. Current FSRH Guidance3 highlights the need to advise patients about the importance of IUD removal when no longer required and about the potential risks of long-term IUD retention. We are grateful to Dr Pillai for highlighting this to our attention and we shall ensure that a recommendation to this effect is included in future updates of the Guidance on ‘Contraception for Women aged Over 40 Years’ and ‘Intrauterine Contraception’.

Case reports are a useful source of evidence where no other evidence exists. We would encourage others to report complications that are particularly rare, serious or associated with prolonged contraceptive use.

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References

Intrauterine Contraception

Intrauterine contraceptive devices

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. Non-steroidal anti-inflammatory therapy temporarily stopped the bleeding but this was tried for 2 weeks and the patient remained heavily symptomatic. She continued to menstruate and was unable to participate in daily activities and work. She was referred to a gynaecology clinic where a diagnosis of IUD-related uterine bleeding was made.

Prior to this the patient had undergone a diagnostic laparoscopy to investigate persistent dysmenorrhoea and severe subserosal inflammation. The laparoscopic findings were consistent with fibroids and an endometriotic nodule of the ileocaecal valve. The decision was made to offer intrauterine contraception (IUC) as the definitive treatment for her recurrent dysmenorrhoea. This was inserted by a consultant gynaecologist through the cervical route using the Vaso-Tac (Bard, USA) system. The procedure was well tolerated and the IUC was left in situ for 12 weeks. The use of IUC was well tolerated and the patient returned to clinic for the removal and replacement of the device at 12 weeks. The patient was reviewed at 10 weeks post insertion and at this stage she was asymptomatic with the exception of breast tenderness and abdominal bloating. The patient had continued to experience severe dysmenorrhoea and recurrent heavy periods. She was reviewed at 12 weeks and was asymptomatic with the exception of abdominal bloating and breast tenderness. She was prescribed a combined oral contraceptive tablet for 3 months and the patient was due for follow-up 3 months after insertion of the IUC.

Informed consent for IUC fitting

Perforation of the uterus is a rare complication of intrauterine device (IUC) fitting. It is quoted as occurring in 1 in 5000 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 uterine. This can lead to the device being free in the Perforation of the uterus is a rare complication of intrauterine device (IUC) fitting. It is quoted as occurring in 1 in 5000 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 uterine. This can lead to the device being free in the abdominal cavity. If this occurs it can cause symptoms such as lower abdominal pain, sepsis and secondary infertility.3 This can be a completely different person. She had suffered one further attack some 6 hours after the IUC was removed and she used 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 reinstate 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 IUC inserted again.

This woman appeared to develop a TAC, which approximated most closely to a cluster headache, and this was the worst pain she had ever experienced. She was prescribed a triptan for her attacks and suffered one further attack some 6 hours after the IUC was removed and so had used 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 reinstate 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 IUC inserted again.

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