Comment on 'Ultrasoundguided retrieval of lost intrauterine devices using very fine grasping forceps: a case series'

I endorse the conclusion of Moro *et al.* that ultrasound-guided retrieval of lost intrauterine devices (IUDs) is a highly successful technique and is well tolerated by women. I would like to add some comments and suggestions about the technique, particularly regarding the instrument used.

In the 12 months to 30 April 2015, 226 women attended my 'complex' case service within the National Health Service (NHS) Gloucestershire Sexual Health Service for management of missing IUD or intrauterine system threads, accounting for around 30% of referrals. I personally saw 136 of these women. All these referrals were seen in 30-minute one-stop appointments staffed by a health care assistant and myself. A sexual and reproductive health (SRH) trainee attended a small number of the clinics. In three cases I did not find the device on scan, and subsequent abdominal X-ray confirmed expulsion or perforation. In 11 cases the device was misplaced, lying completely within the cervix, despite the threads being retracted. In the remainder the 'missing' device was fully or partly within the endometrial cavity. In 41 of those cases, after discussion it was most appropriate to leave a correctly sited device for a further interval. In the remaining 92 cases retrieval was indicated, either to replace a time-expired device, or because the contraceptive method was no longer desired or appropriate. In the majority of these cases one or more other attempts at retrieval (with Emmett thread retrievers or artery forceps) had failed prior to referral.

My technique is based on two important features: use of 2% lidocaine gel (Instillagel®) and use of Hartman crocodile forceps for the retrieval.

I routinely fill the endometrial cavity with Instillagel prior to imaging, as described previously in this Journal.² This provides several potential benefits:

- ▶ In a minority of cases this 'flushes' the threads into view.
- ► The gel enhances transvaginal ultrasound imaging considerably. Polyps, submucous fibroids and adenexal

- findings are more readily visualised. Where appropriate, endometrial thickness can be accurately assessed despite the presence of the device.
- Where the frame is misplaced and/ or partly penetrating myometrium this is easier to see.
- During the imaging some endometrial absorption of local anaesthetic occurs, potentially reducing discomfort during the retrieval.
- ➤ The fluid-filled cavity also enhances subsequent transabdominal imaging, facilitating retrieval and reducing the removal time.
- ▶ The application of suprapubic pressure by an assistant holding the abdominal transducer appears to produce relaxation of the internal os, which seems to occur more reliably when the cavity has been prefilled with gel.

To further reduce the risk of pain we use 10% lidocaine spray (about 10 pumps) to the ectocervix about 3 minutes prior to instrumentation. If stabilisation of the cervix is necessary, paracervical mepivacaine 3% (one to four ampoules) is also injected.

The grasping forceps used by Moro et al. are not designed for use without a hysteroscope. In my view they are fragile, long and unwieldy for the purpose of ultrasound-guided rather than hysteroscopically-guided procedures, and this may increase the risk of perforation. They appear too fragile for grasping any part of the device other than the thread and may therefore be unsuitable for dislodging an embedded coil safely. Many of the cases referred to my service have had the threads avulsed during previous removal attempts. Long Hartmann crocodile forceps are much more appropriate for ultrasound-guided IUD retrieval. They are available as reusable or single-use instruments, the latter costing around £10. This instrument is very efficient for retrieval in all circumstances, including devices without threads and devices embedded within myometrial or cervical tissue.

Using the technique described here, 91/92 devices were retrieved. The one failed removal was an embedded device. I was able to grasp the lower end of the frame but attempts to dislodge it from the myometrium resulted in pain despite the local anaesthetic. At hysteroscopy under general anaesthesia

only the thread attachment ring was visible from the cavity, with the upper two-thirds of the frame having penetrated the myometrium. The device was removed at the same procedure using long Hartman crocodile forceps with transabdominal ultrasound guidance, since no suitable instrument for dislodging an embedded coil was available for use with a hysteroscope.

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Competing interests None declared.





► http://dx.doi.org/10.1136/jfprhc-2015-101317

J Fam Plann Reprod Health Care 2015;**41**:316. doi:10.1136/jfprhc-2015-101325

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