Further comment on the avoidance of pain associated with intrauterine contraceptive insertion

Having read Bahamondes *et al.*'s letter¹ in the July 2014 Journal, I remain unconvinced that we can do so little beyond good 'verbal anaesthesia' and insertion expertise (crucial though these are) to help those few individuals who, unmistakably, suffer significant pain at intrauterine contraceptive (IUC) insertion. I agree with Dr Pillai's remark in her letter² in the April 2014 Journal that women's concerns around the fitting are the main barrier to improving the woefully low uptake of IUCs in the UK, which in a recent survey for women aged 18–49 years was 10%, in contrast to 19% in Sweden.³ Such a major discrepancy is not caused by any known difference between the UK uterus and the Swedish uterus!

Does premedication with an anti-prostaglandin drug such as mefenamic acid fail to reduce the uterine cramping pain component of IUC insertion? I remain unconvinced because:

- ▶ The results of our own double-blind randomised controlled trial from the Margaret Pyke Centre of 68 mainly parous women randomised to receive mefenamic acid 500 mg or identical-looking placebos, 1 hour pre-insertion,⁴ showed a significant reduction in visual analogue scale pain scores for dysmenorrhoea-like pain still present 10 minutes after IUC insertion. [This refutes the statement by Bahamondes *et al.*¹ that this was not statistically significant – I have confirmed the misquote through a recent exchange of emails with the first two authors.] Another interesting finding in our study was a significant increase in scores of zero [i.e. reports of completely absent pain at 10 minutes (44% vs 16% of subjects)].
- ▶ There are two other studies not so far mentioned (Massey *et al.*⁵ and Karabayirli *et al.*⁶) that showed pain reduction with non-steroidal anti-inflammatory drug (NSAID) (naproxen) premedication.

- ▶ The failure of other studies to demonstrate significant improvement through NSAID premedication can be explained by the established inter-individual differences in pain experience. If only 11% of mainly parous women report severe pain,⁷ untreated, and if in many others pain is minimal or transient, NSAID studies can easily fail to recruit sufficient of the former group to have the power to detect a real difference.
- ▶ Dysmenorrhoea pain is linked to high levels of prostaglandins, which are known to cause pain that can indubitably be benefited by NSAIDs,⁸ which are prostaglandin synthetase inhibitors – and patients regularly describe the 'cramping' component of IUC pain, the variety improved in our study, as indistinguishable from primary dysmenorrhoea. Moreover:
- ▶ "Most trials have found NSAIDs to be effective *therapy* for intrauterine device-related pain."⁹ It is exceedingly counterintuitive that they would not also reduce prostaglandin-induced pain when given *pre-emptively*.

It is unsurprising, however, that the sudden sharp somatic pain of tenaculum placement would not be detectably improved by NSAIDs – as we also found.⁴ It was agreed in the original review⁷ that this is "one of the most painful aspects of IUC placement". More data would help, but I find the evidence strong that it can be reduced by local anaesthesia (LA). I fail to see how the studies with contemporaneous well-blinded pain assessment become irrelevant to the identical pain induced at the onset of IUC insertion, just because a different gynaecological procedure follows.

Bahamondes *et al.*'s point is well taken that the reduced tenaculum pain shown by Goldthwaite *et al.*¹⁰ was at the cost of statistically more pain from the LA injection. My view therefore is that this injection should be:

- ▶ An offer that the woman is entirely free to refuse.
- ▶ Limited to one site, the cervix at 12 o'clock, unless the insertion becomes complicated (e.g. through need for dilatation).

- ▶ Limited to 1 ml in volume of the chosen LA,⁷ warmed to around body heat – since 20/22 studies in a systematic review gave point estimates in favour of such warming¹¹ – injected *slowly* (taking at least 10 seconds)¹⁰ and through a very fine needle (26 or 27 gauge). Goldthwaite *et al.* used 2 ml lidocaine, a 22-gauge needle, made no report regarding rate of injection, and can be presumed I think not to have warmed the solution.¹⁰ If all these details are attended to, injection pain can be minimised.

We obviously need more data. I would be particularly interested in a double-blind placebo controlled trial of cervical anaesthesia mediated by a potent LA pessary, or gel via a vaginal applicator, for self-insertion 45 minutes or so in advance of IUC placement.

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