

Supplementary Text 1

INCLUDED STUDIES

Studies that fulfilled the requirements.

- [1] Rasheedy R, Tamara TF, Allam IS, et al. Vaginal misoprostol before copper IUD insertion after previous insertion failure: a double-blind, placebo-controlled, parallel-group, randomised clinical trial. *Eur J Contracept Reprod Health Care*. 2019;24:222–226.
- [2] Ibrahim ZM, Sayed Ahmed WA. Sublingual misoprostol prior to insertion of a T380A intrauterine device in women with no previous vaginal delivery. *Eur J Contracept Reprod Health Care*. 2013;18:300–308.
- [3] Edelman AB, Schaefer E, Olson A, et al. Effects of prophylactic misoprostol administration prior to intrauterine device insertion in nulliparous women. *Contraception*. 2011;84:234–239.
- [4] Bahamondes MV, Espejo-Arce X, Bahamondes L. Effect of vaginal administration of misoprostol before intrauterine contraceptive insertion following previous insertion failure: a double blind RCT. *Hum Reprod*. 2015;30:1861–1866.
- [5] Maged AM, Youssef G, Eldaly A, et al. Benefits of vaginal misoprostol prior to IUD insertion in women with previous caesarean delivery: a randomised controlled trial. *Eur J Contracept Reprod Health Care*. 2018;23:32–37.
- [6] Abdellah MS, Abbas AM, Hegazy AM, et al. Vaginal misoprostol prior to intrauterine device insertion in women delivered only by elective cesarean section: a randomized double-blind clinical trial. *Contraception*. 2017;95:538–543.
- [7] Sääv I, Aronsson A, Marions L, et al. Cervical priming with sublingual misoprostol prior to insertion of an intrauterine device in nulliparous women: a randomized controlled trial. *Hum Reprod*. 2007;22:2647–2652.
- [8] Scavuzzi A, Souza ASR, Costa AAR, et al. Misoprostol prior to inserting an intrauterine device in nulligravidas: a randomized clinical trial. *Hum Reprod*. 2013;28:2118–2125.
- [9] Lathrop E, Haddad L, McWhorter CP, et al. Self-administration of misoprostol prior to intrauterine device insertion among nulliparous women: a randomized controlled trial. *Contraception*. 2013;88:725–729.
- [10] Espey E, Singh RH, Leeman L, et al. Misoprostol for intrauterine device insertion in nulliparous women: a randomized controlled trial. *Am J Obstet Gynecol*. 2014;210:208.e1–208.e5.
- [11] Dijkhuizen K, Dekkers OM, Holleboom CAG, et al. Vaginal misoprostol prior to insertion of an intrauterine device: an RCT. *Hum Reprod*. 2011;26:323–329.
- [12] Swenson C, Turok DK, Ward K, et al. Self-administered misoprostol or placebo before intrauterine device insertion in nulliparous women: a randomized controlled trial. *Obstet Gynecol*. 2012;120:341–347.
- [13] Heikinheimo O, Inki P, Kunz M, et al. Double-blind, randomized, placebo-controlled study on the effect of misoprostol on ease of consecutive insertion of the levonorgestrel-releasing intrauterine system. *Contraception*. 2010;81:481–486.
- [14] Lotke PS, Tiwari A, Leybas N. Inserting intrauterine devices in nulliparous women: is misoprostol beneficial? A registered clinical trial. *Am J Clin Exp Obstet Gynecol*. 2013;1:62–68.

EXCLUDED STUDIES

Not pertinent studies: [1]

No RCT: [2–19]

Not used misoprostol: [20]

RCT with unclear methods (e.g. no reference to the approval of the ethics committee in charge) and inconsistent data between tables and text: [21]

- [1] Elkhoully NI, Maher MA. Different analgesics prior to intrauterine device insertion: is there any evidence of efficacy? *Eur J Contracept Reprod Health Care*. 2017;22:222–226.
- [2] Abbas AM. Ultrasound-guided intrauterine device insertion: a step closer to painless insertion: a randomised control trial. *Eur J Contracept Reprod Health Care*. 2018;23:165.
- [3] Ekelund M, Melander M, Gemzell-Danielsson K. Intrauterine contraception: attitudes, practice, and knowledge among Swedish health care providers. *Contraception*. 2014;89:407–412.
- [4] Bahamondes MV, Hidalgo MM, Bahamondes L, et al. Ease of insertion and clinical performance of the levonorgestrel-releasing intrauterine system in nulligravidas. *Contraception*. 2011;84:e11–e16.
- [5] Choksuchat C. Clinical use of misoprostol in nonpregnant women: review article. *J Minim Invasive Gynecol*. 2010;17:449–455.
- [6] Wildemeersch D. Intrauterine drug delivery for contraception and gynaecological treatment: novel approaches. *Handb Exp Pharmacol*. 2010;267–298.
- [7] Vickery Z, Madden T. Difficult intrauterine contraception insertion in a nulligravid patient. *Obstet Gynecol*. 2011; 117:391–395.
- [8] Yiu-Tai L, Wen-Ling L, Peng-Hui W. Difficult intrauterine device insertion. *Hum Reprod*. 2011;26:2912; author reply 2192–2912; author reply 2193.
- [9] Fiala C, Gemzell-Danielsson K, Tang OS, et al. Cervical priming with misoprostol prior to transcervical procedures. *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics*. 2007;99 Suppl 2:S168–S171.
- [10] Li YT, Kuo TC, Kuan LC, et al. Cervical softening with vaginal misoprostol before intrauterine device insertion. *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics*. 2005;89:67–68.
- [11] Maher MA. Different analgesics prior to intrauterine device insertion: is there any evidence of efficacy? *Eur J Contracept Reprod Health Care*. 2018;23:164.
- [12] Abbas AM. Which analgesic is efficient prior to intrauterine device insertion? *Eur J Contracept Reprod Health Care*. 2017;22:480.
- [13] Bruni V, Sardo ADS, Arisi E. From recommendation to action. Expert consensus statements on: Drivers and barriers to the proper use of intrauterine systems; Detailed intrauterine system counselling for women; Practical aspects related to the insertion of intrauterine system. *Italian Journal of Gynaecology and Obstetrics*. 2016; 7–27.
- [14] Guillebaud J. Comment on 'practical advice for avoidance of pain associated with insertion of intrauterine contraceptives'. *The journal of family planning and reproductive health care*. 2014;40:150–151.
- [15] Bahamondes L, Monteiro I. Comments on manuscript: vaginal misoprostol prior to intrauterine device insertion in women delivered only by elective cesarean section: a randomized double-blind clinical trial. *Contraception*. 2017;95:434–435.
- [16] Dijkhuizen K, Helmerhorst FM. Reply: Difficult intrauterine device insertion. *Human Reproduction*. 2011; 26:2912–2913.

- [17] Concin H, Bösch H, Hintermüller P, et al. Use of the levonorgestrel-releasing intrauterine system: an Austrian perspective. *Current opinion in obstetrics & gynecology*. 2009;21 Suppl 1:S1–S9.
- [18] Gemzell-Danielsson K, Mansour D, Fiala C, et al. Management of pain associated with the insertion of intrauterine contraceptives. *Human reproduction update*. 2013;19:419–427.
- [19] Lopez LM, Bernholc A, Zeng Y, et al. Interventions for pain with intrauterine device insertion. *The Cochrane database of systematic reviews*. 2015;CD007373.
- [20] Dakhly DMR, Bassiouny YA. Ultrasound-guided intrauterine device insertion: a step closer to painless insertion: a randomized control trial. *Eur J Contracept Reprod Health Care*. 2017;22:349–353.
- [21] Mansy AA. Does sublingual misoprostol reduce pain and facilitate IUD insertion in women with no previous vaginal delivery? A randomized controlled trial. *Middle East Fertility Society Journal*. 2018;23:72–76.