women discontinued due to problems with compliance to the study. Although women were not randomised, statistical tests showed both groups were similar with respect to demographic details of women and infants. The results indicated there was no significant difference in mean volume of milk produced between the two groups. Milk volume was measured as pre- and post-feed infant weight, over 24 hours as is the standard method of assessment. The composition of milk was similar in both groups in terms of triglyceride, protein and lactose content. It was calculated that the suckling infant received a maximum of 0.01–0.05 µg/kg/day desogestrel. This accounts for 2.6–3.7% of the daily maternal dose. No significant differences were noted in weight, length and biparietal diameter up to the seventh cycle of treatment. When infants were followed up at 18 and 30 months there were no clinically relevant differences between the two groups. The authors conclude that 75 µg desogestrel progestogen-only pill is a safe and effective method of contraception for lactating women. Efficacy cannot be concluded from the study as pregnancy rates were not reported, however the authors refer to the effectiveness of the desogestrel pill from published data where desogestrel is known to inhibit ovulation and has a 12-hour window for missed pills. Bias may have been introduced due to the non-randomisation of women and also because neither patient nor researchers were blinded. It is unclear if laboratory staff were blinded. However, automated testing was used to identify milk composition. The safety of the desogestrel pill for lactating women has been demonstrated in this study.

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Intrauterine device insertion following abortion

Insertion of an intrauterine contraceptive device after induced or spontaneous abortion: a review of the evidence. Stanwood NL, Grimes DA, Schulz KF. *Br J Obstet Gynaecol* 2001; **108:** 1168–1173

The purpose of this systematic review was to assess the safety and efficacy of immediate post-abortal intrauterine contraceptive device (IUD) insertion. The introduction clearly outlined potential benefits of immediate IUD insertion: providing immediate contraception when the woman's motivation is high, and the avoidance of the discomfort associated with insertion. Disadvantages of immediate IUD insertion may include: increased risk of perforation; increased risk of expulsion; increased risk of pelvic infection; and possibly reduced efficacy. The authors comprehensively and systematically reviewed randomised controlled trials (RCTs), in which at least one arm involved the insertion of an IUD immediately after spontaneous or therapeutic abortion. Databases searched included Medline; Popline, the Cochrane Controlled Trials Register and EMBASE. Of the 12 randomised trials identified, one was excluded due to non-randomisation, one was excluded as it did not identify the main outcomes of this review, and two were excluded due to design faults and unethical practice. Women of any age and gravity were included. All trials included had been carried out in the 1970s and 1980s. The two largest and most methodologically sound World Health Organization (WHO) studies, which included 4476 women-years of data, were both carried out almost 20 years ago in 1983. The IUDs used during these studies included the Copper 7, Lippes Loop and the Copper T220.

The following rates were obtained from the two WHO studies. Insertion of an IUD immediately following therapeutic abortion was associated with: perforation rates of 1 per 1000 insertions (3/2348 cases); expulsion rates of 7% (157 expulsions); failure rates of 2 per 100 woman years (this included 70 intrauterine and extrauterine pregnancies); and rates of pelvic infection (PID) of 0.4 per 100 woman years (12 cases of PID). Insertion of an IUD immediately following spontaneous abortion was associated with: perforation rates of 0.9 per 1000 insertions (1 in 1060 insertions); expulsion rates of 0.9% (128 expulsions); failure rates of 2 per 100 woman years (21 intrauterine pregnancies); and rates of PID of 0.2 per 100 women years (three cases of PID). The authors also noted that the risk of expulsion increased with increasing gestational age, with rates increasing 4.5-fold from first to second trimester abortion.

There were a number of factors that could have introduced bias. Many of the studies included were more than 20 years old and in that time clinical practice has changed. The IUDs used in these studies are not used today. Only one IUD included had doses of copper comparable to IUDs in use today which often contain 380 mm^2 of copper. This may affect the efficacy data presented since those devices with higher levels of copper have lower failure rates than do those with low doses of copper or inert devices. Problems interpreting the results from these studies to our present clinical practice may arise as a result of a number of factors. The majority of women included in the studies underwent surgical termination of pregnancy (STOP), rather than medical termination of pregnancy with prostaglandins (MTOP). This may influence the incidence of post-abortal infection in the study population. The authors concluded that IUD insertion immediate post-therapeutic or spontaneous abortion was safe and effective. Rates of pelvic infection (PID), one of the main outcomes measured, may differ in these older studies to the rates today. Rates of PID may be reduced by: increasing the numbers of women undergoing medical termination of pregnancy, thus avoiding uterine instrumentation; active screening for sexually transmitted disease pre-termination; and the use of prophylactic antibiotic policies. The rates of infection may increase, however, due to the increasing background rates of sexually transmitted infections (STIs), chlamydia and gonorrhoea in particular. Rates of expulsion, perforation, infection and failure were comparable to IUD insertion at other times. A follow-up appointment for an IUD check is essential. This study has highlighted the need for prospective studies of currently used copper devices, and indeed hormonal intrauterine systems.

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Mifepristone as a contraceptive agent

Daily low dose mifepristone has contraceptive potential by suppressing ovulation and menstruation: a double blind randomized control trial of 2 mg and 5 mg per day for 120 days. Brown A, Cheng L, Suiqing L, et al. *J Clin Endocrinol Metab* 2002; **87:** 63–70

It has previously been demonstrated that antiprogestins have contraceptive potential. This current study is a double-blind randomised control trial (RCT) of daily mifepristone (2 mg versus 5 mg) for 120 days. It was conducted in Edinburgh (58 subjects) and Shanghai (40 subjects). In addition to examining effects on ovulation and bleeding, contraceptive efficacy was examined in a subgroup of 50 subjects who used it as their sole method of contraception. Both 2 mg and 5 mg of mifepristone suppressed ovulation (90% and 95%, respectively) and induced amenorrhoea in the majority of cycles (65% and 88%, respectively), although this was a more consistent finding with the 5 mg dose. Even in cycles in which ovulation did occur, the histology of the endometrium was such that it would be unlikely to support a pregnancy. Furthermore, there were no pregnancies amongst 50 subjects in over 200 months of exposure. Despite prolonged anovulation with continued oestrogen secretion, it is reassuring that end-of-study endometrial biopsies displayed no evidence of hyperplasia or atypia. Few side effects were reported and menses resumed within 3 weeks of cessation of treatment. Interestingly, Chinese subjects proved more sensitive to mifepristone as they experienced greater ovarian suppression and a higher incidence of amenorrhoea. This may be related to their lower body mass index (BMI) or dietary effects on the enterohepatic circulation of steroids. Importantly, this study provides medium-term data to support the potential of mifepristone (2 mg or 5 mg) as a daily contraceptive pill, by inhibiting ovulation and/or through effects on the endometrium. This oestrogen-free alternative to the progestogen-only-pill would also have the advantage of amenorrhoea. Larger studies of long-term duration are now needed.

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