Original research article

Efficacy of medical abortion prior to 6 gestational weeks: a systematic review ☆,☆☆

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Abstract

Objective: The objective was to describe the efficacy of medical abortion using mifepristone and misoprostol for gestations less than 6 weeks.

Study design: We searched PubMed and Cochrane databases for articles in any language that examined the success of mifepristone and misoprostol abortion at gestational ages <42 days. Data were independently abstracted by two authors and graded for evidence quality. A pooled analysis of efficacy and a summary odds ratio of abortion failure of <42 days' gestation compared with gestational week 42–49 days were performed for randomized trials as well as for prospective studies.

Results: Six randomized controlled trials and nine prospective observational studies met inclusion criteria. Included studies varied greatly in regimens of mifepristone and misoprostol used, and assessment of and timing of outcome of abortion. A pooled proportion of the randomized trials estimated a proportion of unsuccessful abortion of 0.02 (95% confidence interval 0.01–0.03). In the prospective studies, the proportions ranged between 0.02 and 0.17, with considerable heterogeneity in the pooled estimate. However, the two largest observational studies reflected the estimates of the randomized trials (range 0.02–0.03). The summary odds ratios indicated that the odds of unsuccessful abortion were not significantly different between gestational age groups (<42 days versus >42–49 days).

Discussion: These analyses support the use of medical abortion at gestational ages <42 days. Efficacy rates are high overall and appear to reflect those observed during the seventh week of pregnancy. Women who prefer to initiate treatment as soon as early pregnancy is diagnosed may do so without delay.

Implications: Women can expect success using medical abortion regimens as soon as pregnancy is diagnosed; further research of abortion outcomes disaggregated by gestational age and visualization of the gestational sac is warranted.

1. Introduction

Medical abortion is an effective and acceptable option for abortion care [1–3]. A growing proportion of induced abortions in the United States (US) and internationally are medical abortions [4]. Medical abortion at less than 9 weeks of gestation accounted for 31% of all clinic-based abortions in 2014 in the US, as compared with 24% in 2011 [4,5]. Medical abortion represents the majority of induced abortions in some European countries [4,5]. Given the few medical requirements for safe provision of medical abortion drugs and that the abortion process is generally managed at a woman's home on her own, medical abortion has expanded women's access to induced abortion globally. Improved access to medical abortion is a strategy to reduce recourse to unsafe abortion, which remains a significant threat to the lives and well-being of women across the world [6,7]. Identifying effective strategies to further expand access to

Table 1
Evidence for effectiveness of medical abortion at less than 42 days of gestational age: randomized trials

Author Year Location	Study design Sample size	Inclusion criteria	Mifepristone dose Mifepristone interval	Misoprostol dose Misoprostol route	Outcomes Successful abortion	Definition of complete abortion, assessment and timing	Limitations	Quality (USPSTF)
ICMR[12] 2000 India	Multicenter randomized trial comparing misoprostol to meteneprost, n=450 in miso group ≤63 days n=146 ≤42 days	Pregnant by urine hCG, ≤63 days amenorrhea	200 mg 48 h	600 mcg oral	≤42 days: 130/146 (89.0%) 43–48 days: 146/163 (89.6%)	No surgical evacuation, finding of bulky uterus, or continuing pregnancy (urine hCG) Timing: by 22 days	Not blinded, randomization procedures not described	Fair
Chawdhary[13] 2009 Nepal	Randomized trial comparing mifepristone–miso to miso alone, n=50 for mife–miso n=17 ≤42 days	Intrauterine pregnancy ≤63 days by transvaginal ultrasound	200 mg 48 h	800 mcg vaginal	≤35 days: 9/9 (100%) ≤42 days: 8/8 (100%) 43–49 days: 16/16 (100%)	No surgical intervention; completed expulsion confirmed by ultrasound Timing: by 10 days		Fair
Li[14] 2015 China	Randomized trial comparing mifepristone doses, n=2421 analyzed ≤35 days	Normal menstrual cycles, ≤35 days amenorrhea, detectable serum hCG, thickened endometrium or gestational sac by transvaginal ultrasound	I:150 mg II:125 mg III:100 mg IV:75 mg V: 50 mg 24 h	200 mcg oral	I: 476/484 (98.3%) II: 473/483 (97.9%) III: 475/487 (97.5%) IV:478/486 (98.4) V: 472/481 (98.1%)	No intrauterine remnants via weekly hCG and ultrasound, >50% hCG decline Timing: by next menses		Good

Table 1 (*continued*)

Author Year Location	Study design Sample size	Inclusion criteria	Mifepristone dose Mifepristone interval	Misoprostol dose Misoprostol route	Outcomes Successful abortion	Definition of complete abortion, assessment and timing	Limitations	Quality (USPSTF)
Li[15] 2016 China	Randomized trial comparing self versus hospital administration of misoprostol, n=735 analyzed ≤35 days	Normal menstrual cycles, ≤35 days amenorrhea, detectable serum hCG, thickened endometrium or gestational sac by transvaginal ultrasound	75 mg 24 h	400 mcg oral	721/735 (98.1%) 8/735 (1.1%) ongoing pregnancy 3/735 (0.41%) ectopic pregnancy	No surgical intervention Hospital administration: observed expulsion by 6 h or >50% hCG decline, weekly hCG and ultrasound Self-administration: pregnancy test and phone follow-up Timing: by next menses	Outcomes assessed differently by group, 7 subjects in self-administration lost to follow-up and not analyzed	Good
Shannon[16] 2006 Canada	Randomized nonblinded trial comparing miso doses n=956 total ≤56 days n=368 <43 days	Intrauterine pregnancy ≤56 days by transvaginal ultrasound	200 mg 24–48 h	I: 400 mcg oral II: 600 mcg oral III: 800 mcg vaginal	<42 days: I: 131/135 (97.1%) II: 118/121 (97.6%) III: 111/112 (99.1%) 42–49 days: I: 112/120 (93.0%) II: 115/124 (92.5%) III: 118/128 (92.1%)	No surgical intervention Timing: by day 36	Proportions don't calculate correctly. From table with total n, % for each group	Good
Winikoff[10] 2008 United States	Multicenter randomized open-label trial comparing oral and buccal miso, n=847 analyzed ≤63 days n=168 ≤42 days	Intrauterine pregnancy ≤63 days by exam and/or transvaginal ultrasound as needed	200 mg 24–36 h	800 mcg oral or buccal	≤42 days: Oral: 90/92 (97.8%) Buccal: 75/76 (98.7%) 43–49 days: Oral: 107/113 (94.7) Buccal: 132/137 (96.4%)	No surgical intervention Timing: by 7–14 days	Lost to follow-up excluded from analysis	Fair

Table 2
Evidence for effectiveness of medical abortion at less than 42 days of gestational age: prospective studies.

Author Year Location	Study design Sample size	Inclusion criteria	Mifepristone dose Mifepristone interval	Misoprostol dose Misoprostol route	Outcomes Successful abortion	Definition of complete abortion, assessment and timing	Limitations	Quality (USPSTF)
Ashok[17] 2002 Scotland	Prospective observational study (consecutive case series) n=4132, n=191 ≤5 weeks n=667 ≤6 weeks	Pregnant <63 days based on ultrasound CRL (96.5%) or menstrual history alone (3.5%)	200 mg 36–48 h	800 mcg vaginal	≤5 weeks 188/191 (98.4%) 5–6 weeks 656/667 (98.4%) 6–7 weeks 1128/1154 (97.7%)	No surgical intervention based on ultrasound or POC evaluation (directly observed in-clinic), some serial hCG Timing: by 2 weeks	Repeat misoprostol given if no abortion in 4 h (not analyzed separately)	Fair
Child[23] 2001 United Kingdom	Prospective cohort study comparing medical to surgical abortion, n=55 ≤42 days for medical abortion	Pregnant <63 days based on LMP and exam, ultrasound only if in doubt	200 mg 48 h	800 mcg vaginal	≤42 days 52/55 (94.5%) 43–49 days 104/114 (91.2%)	Visualized conceptus or exam, evaluation not specified Timing: by 1 week	Minimal use of ultrasound	Poor
Heikenheimo[18] 2007 Finland	Prospective comparison of fixed mife–miso interval to flexible, n=1289 total n=290 <42 days	Intrauterine pregnancy by ultrasound ≤63 days	200 mg 1–3 days	400 mcg vaginal (increased to 800 mcg after Jan 2002)	≤34 days 64/65 (98.5%) 35–41 days 213/225 (94.7%) 42–48 days 375/395 (94.9%)	No gestational sac by clinical exam and ultrasound Timing: by 2–3 weeks	Miso dose and interval variable	Fair
Murthy[19] 2005 United States	Prospective observational trial of simultaneous mife/miso, n=40	Intrauterine pregnancy ≤49 days by vaginal ultrasound	200 mg <10 min	800 mcg vaginal	≤42 days: 12/13 (92.3%)	No surgical intervention; no gestational sac on transvaginal ultrasound Timing: by 36 days	One additional misoprostol dose given if needed	Good
Ngoc[20] 2004 Vietnam	Multicenter open label comparison of home versus office miso, n=1564 total ≤56 days (88.9% home users)	Intrauterine pregnancy <56 days by exam, history, ultrasound (when available) or hCG	200 mg 2 days	400 mcg oral	28–35 days 88% 36–42 days 87.2% 43–49 days 91.1%	Complete expulsion by exam and sometimes ultrasound Timing: by 2 weeks	n for GA subgroups not available	Fair

Table 2 (continued)

Author Year Location	Study design Sample size	Inclusion criteria	Mifepristone dose Mifepristone interval	Misoprostol dose Misoprostol route	Outcomes Successful abortion	Definition of complete abortion, assessment and timing	Limitations	Quality (USPSTF)
Population Council[21,27] France	Open-label multicenter study, n=1286 ≤49 days n=582 ≤42 days	Pregnant ≤49 days by history and by ultrasound at the discretion of the provider	600 mg 48 h	400 mcg oral	<36 days: 117/119 (98.3%) 36–42 days: 447/463 (98.5%) 43–49 days: 570/607 (93.9%)	Complete expulsion without surgical intervention Timing: by 8–15 days	How complete expulsion determined unclear (surgical intervention for health, request, or day 15 for ongoing or incomplete abortion)	Good
Population Council[21,27] France	Open-label multicenter study, n=1104 ≤63 days n=186 ≤42 days	Pregnant ≤63 days by history and by ultrasound at the discretion of the provider	600 mg 36–48 h	400 mcg oral	<36 days: 15/15 (100%) 36–42 days: 163/171 (95.3%) 43–49 days: 293/306 (95.8%)	Complete expulsion without surgical intervention Timing: by 10–18 days	How complete expulsion determined unclear (surgical intervention for health, request, or day 15 for ongoing or incomplete abortion)	Good
Schaff[22] 2001 United States	Prospective study of women with no GS on ultrasound (40±9 days amenorrhea) n=30	Pregnant, no gestational sac on vaginal ultrasound, and normal bimanual exam	200 mg 48 h	800 mcg vaginal repeated if HCG decline not >50%	25/30 (88%) 2/30 ectopic 2/30 surgical intervention for continuing pregnancy 1/30 lost to follow-up	hCG decline >50% after 1 or 2 doses of miso Timing: day 15 or until hCG negative	hCG not checked prior to inclusion; would have excluded ectopic pregnancy	Fair
Winikoff[2] 1997 China, Cuba and India	Comparison of medical to surgical abortion, n=799 for medical abortion ≤56 days	Pregnant ≤56 days on clinical exam	600 mg 48 h	400 mcg oral	≤5 weeks: China: 134/145 (92.4%) Cuba: 31/34 (91.28%) 6 weeks: Cuba: 75/81 (92.6%)	Surgical intervention for: incomplete medication, patient or provider preference Timing: by 17 days	Data from India not presented disaggregated by gestational age	Fair

medical abortion may ensure safe abortion care where trained providers are limited. Simplifying the process of obtaining a medical abortion by expanding the earlier gestational ages at which it can safely be used has the potential to improve access.

Multiple medical abortion regimens exist for use in the first weeks of pregnancy [3]. The most effective combine mifepristone with misoprostol; however, there is variation in both the doses of medicine used, and the timing and route of administration of the two drugs [8]. A large body of evidence and global practice supports the efficacy of a dose of mifepristone 200 mg followed by misoprostol 800 mcg in pregnancies up to 63 days' gestational age [9]. Gestational age is known to affect the efficacy of all regimens, with decreasing efficacy after 9 weeks' gestation [10]. These protocols are highly effective, with treatment failure occurring in approximately 2%–5% of cases [3,9].

Less is known regarding the efficacy of medical abortion in very early pregnancies (<42 days' gestational age), and case–control study evidence has indicated the possibility of a higher failure rate in gestations of less than 7 weeks [11]. Even less efficacy data have been available for pregnancies in which it is too early to visualize a gestational sac on ultrasound. As most women seeking abortion care are at gestations of 6 or more weeks, data are limited in the lower age range from any single clinical trial. There are many reasons why a woman may prefer to terminate a pregnancy as early as the diagnosis of pregnancy is made or even as early as when she misses her menses. The objective of this review is to synthesize the evidence on the efficacy of medical abortion using mifepristone with misoprostol in pregnancies less than 42 days' gestation.

2. Materials and methods

We searched Pubmed and Cochrane databases for peer-reviewed articles which reported the efficacy of medical abortion among women with a pregnancy of less than 42 days' gestation. We searched from database inception through January 2017. A combination of medical subject headings, MeSH, keywords and text words were used. Search terms included induced abortion, first trimester, misoprostol and mifepristone.

Our criteria for inclusion included studies which collected data prospectively of any design and in any language that reported on efficacy outcomes of medical abortion with mifepristone and misoprostol. Included studies reported outcomes for participants with gestational ages less than 42 days. Our primary outcome of interest was successful abortion, defined as no surgical intervention needed to achieve complete expulsion of the pregnancy.

Two authors participated in summarizing and systematically assessing the evidence in the included studies using standard data abstraction forms (M.K.B. and N.K.). The quality of each individual piece of evidence was assessed

independently using the United States Preventive Services Task Force grading system (https://www.uspreventiveservicestaskforce.org/Page/Name/grade-definitions). In case of any disagreement, the assessment of the third author was sought (M.I.R.).

We planned a pooled estimate of the proportion of the success of the abortion in the randomized trials and prospective studies identified. Where data were available by gestational age week, we planned a summary odds ratio (OR) comparing odds of unsuccessful medical abortion at <42 days with abortion between 43 and 49 days. Analyses were conducted using Stata version 12 (Statacorp, College Station, TX, USA) and RevMan version 5.3 (Copenhagen, Denmark: The Nordic Cochrane Centre, The Cochrane Collaboration, 2014).

3. Results

The search strategy identified 174 articles, of which 15 met our inclusion criteria (Tables 1–2) [2,10,12–23]. Seven articles met criteria but did not report data disaggregated by gestational age less than 42 days; corresponding authors were contacted to ask for these data [19,24–29]. Two authors responded with data; one allowed inclusion of the article in this review [19], and the other provided the data included in the Food and Drug Administration (FDA) report on mifepristone [21].

Included studies ranged in quality from poor to good. Studies ranged in both doses and routes of mifepristone and misoprostol used, as well as differed in inclusion criteria such as how pregnancy was diagnosed and outcome assessment and timing.

3.1. Randomized trials

Six randomized controlled trials reporting on successful medical abortion at less than 42 days' gestation were identified (Table 1) [10,12–16]. The quality of the studies ranged from fair to good. No studies were randomized evaluating abortion success based on gestational age (<42 days versus >42 days). Mifepristone doses ranged from 50 to 200 mg, administered 24–48 h prior to misoprostol. Misoprostol dosing was more varied between studies: 200–800 mcg, administered by oral, buccal or vaginal routes.

Method used to assess gestational age and location varied among studies, with a combination of history, clinical exam, hCG testing and use of ultrasonography. Of the six identified trials, four used ultrasound routinely to document pregnancy on study enrollment [13–16]. One study utilized clinical examination and hCG testing, and resorted to ultrasound only when needed [10]. Only one study did not utilize ultrasound on study initiation, relying instead on history, clinical exam and serial urine pregnancy testing [12].

All studies assessed abortion completion; however, differing time points and methods for assessing completion were used. Evaluation of abortion completion occurred between 10 and 36 days following misoprostol administration.

A combination of history, observation of expelled products, serial hCG tests and ultrasound examination was used to confirm complete abortion. The majority utilized ultrasound to document a successful abortion [13–16]. One trial predominantly used ultrasound, except for one site where physical examination and history were the first approach, with ultrasound where needed [10]. Only one study evaluated completion of abortion without ultrasound routinely: a negative urine pregnancy test and pelvic exam at day 22 were used to document completion [12].

We calculated a pooled proportion of the randomized trials to estimate proportion of unsuccessful abortions. This resulted in an estimate for unsuccessful abortion of 0.02 (95% CI 0.01–0.03) (Fig. 1). This estimate excludes the Chawdhary et al. study, which could not be included in the calculation given that it reported no unsuccessful abortions [13]. There was substantial heterogeneity in this estimate, driven by one study with an unsuccessful abortion proportion of 0.11 [12]. This fair-quality study utilized a different method of outcome assessment than the other studies: successful abortion was defined by both a negative pregnancy test and pelvic exam confirming the uterus had returned to nonpregnant size on exam by day 22. As the remaining included trials had estimates with a narrow confidence interval (CI) ranging from 0.01 to 0.02, the outcome assessment criteria used are a possible explanation for this outlier in the efficacy outcome.

3.2. Prospective studies

Nine prospective observational studies met our inclusion criteria (Table 2) [2,17–23]. Quality of the identified studies ranged from poor to good. Mifepristone doses ranged from 50 to 600 mg with the majority of studies using a 200-mg dose. Misoprostol dosing ranged from 400 to 800 mcg, and the oral, vaginal and buccal routes were all included. As noted with the randomized trials, differences existed in how studies determined pregnancy on study enrollment. The majority relied on transvaginal ultrasonography to document pregnancy location and gestational age. Three studies indicated that while transvaginal ultrasound was routinely performed, it was not mandatory for inclusion [2,17,23].

Ultrasonography was the most common technique used for confirming complete abortion. The largest study directly observed passage of products of conception, as women remained in-clinic following misoprostol [17]. Range of days to assess outcome was 1 week to 36 days or next menses.

The proportion of unsuccessful abortion in the prospective studies ranged between 0.02 and 0.17. A pooled proportion of these data result in an estimate of 0.04 (95% CI 0.03–0.06) with considerable heterogeneity (Fig. 2). The two largest studies, each with more than 500 women, reported estimates similar to that of the randomized controlled trials in the range of 0.02–0.03 [17,21]. All but one of the studies with smaller sample sizes estimated a proportion of unsuccessful abortion of less than 0.10 [20].

The heterogeneity of the prospective observational data, due at least in part to the differing study designs with variable measures of outcome assessment, reasons for surgical intervention and length of follow-up, threatens the validity of the pooled proportion estimate. For insight into whether a different analysis of pooled data might be more informative and increase validity, we conducted a summary OR for the primary outcome compared with the gestational age week of 43–49 days to mitigate some heterogeneity between studies by providing a comparison of outcome estimates within each
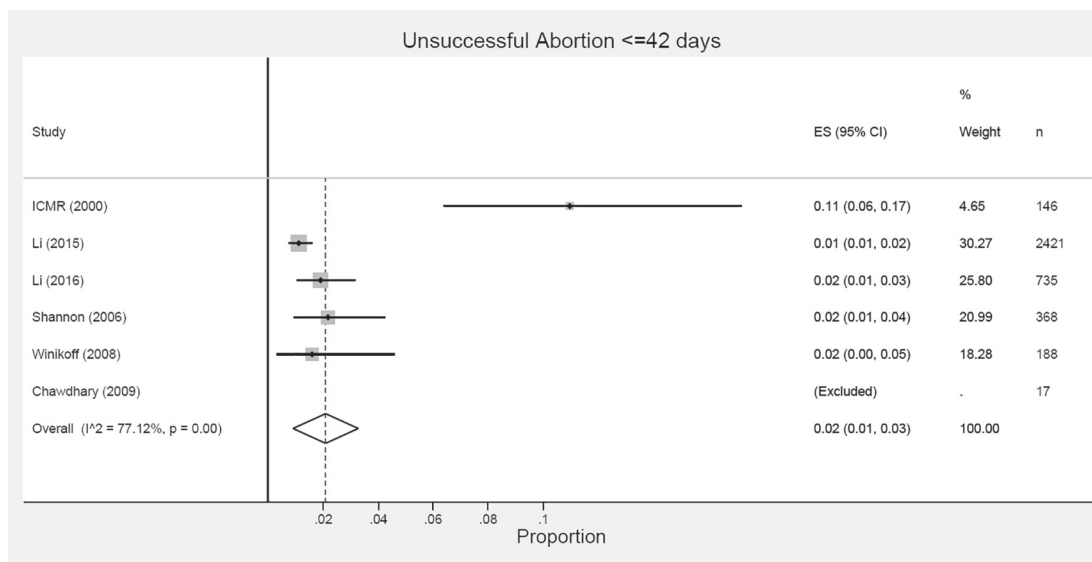

Study	ES (95% CI)	% Weight	n
ICMR (2000)	0.11 (0.06, 0.17)	4.65	146
Li (2015)	0.01 (0.01, 0.02)	30.27	2421
Li (2016)	0.02 (0.01, 0.03)	25.80	735
Shannon (2006)	0.02 (0.01, 0.04)	20.99	368
Winikoff (2008)	0.02 (0.00, 0.05)	18.28	188
Chawdhary (2009)	(Excluded)	.	17
Overall (I^2 = 77.12%, p = 0.00)	0.02 (0.01, 0.03)	100.00	

ES= estimate
N= Number

Fig. 1. Meta-analysis of proportions of unsuccessful medical abortions in randomized controlled trials including gestational ages <42 days.
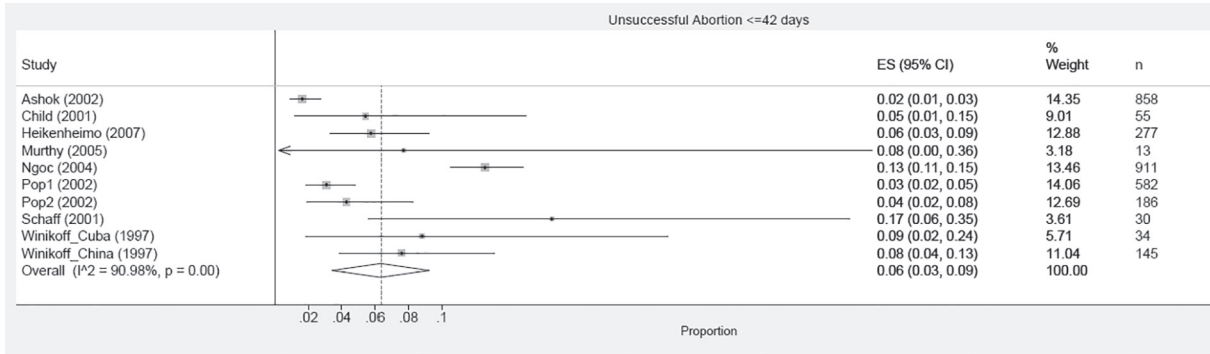
Fig. 2. Meta-analysis of proportions of unsuccessful medical abortion in prospective observational studies including gestational ages <42 days.

study (Fig. 3). These data include four of the randomized controlled trials, which provided data by the two gestational age ranges [10,12,13,16] and six of the prospective studies [17,18,20,21,23]. The summary OR for the randomized controlled trials was 0.51 (0.21–1.27), and that for the prospective observational studies was 0.90 (0.60–1.33), although substantial heterogeneity remained. This analysis indicates that the odds of unsuccessful abortion were not significantly different between gestational age groups (<42 days versus >42–49 days) and, if anything, were somewhat less likely among pregnancies <42 days.
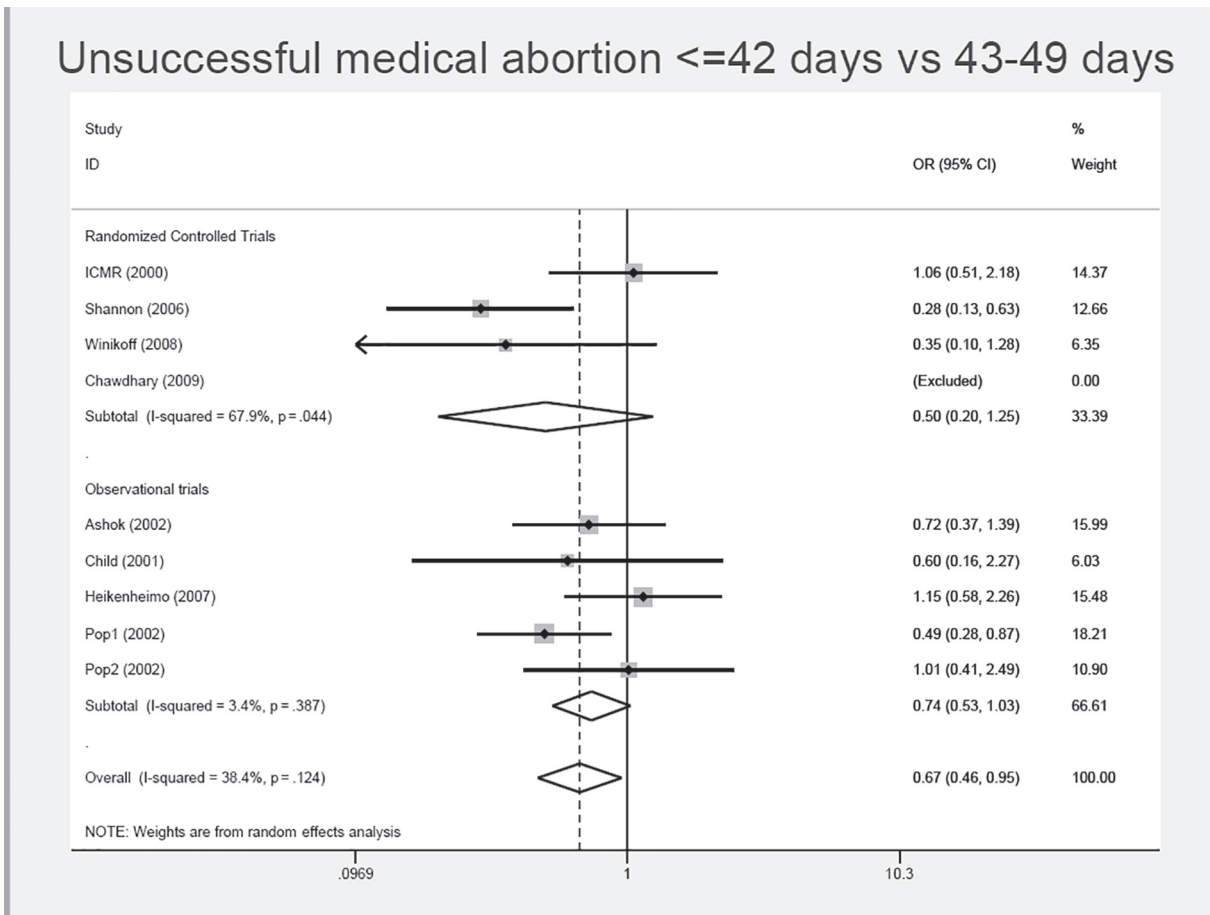
Fig. 3. Summary odds ratio of unsuccessful medical abortion <42 days' gestation versus 43–49 days' gestation.

4. Discussion

Our results demonstrate that mifepristone and misoprostol are effective for early medical abortion (<42 days' gestation), and support the practice of advising women that use of medical abortion at the time of the diagnosis of unwanted pregnancy is safe and effective. When medical abortion is desired, requiring women to wait to reach a specific gestational age, development stage or until a gestational sac is visualized on ultrasound introduces an unnecessary barrier to abortion. The data in this report refute previous findings that suggest an increase in failure rates before 7 weeks' gestation, possibly due to progesterone levels being too low for a maximal response to mifepristone [11].

Although the randomized controlled trials were not randomized based on gestational age, they were generally of good quality — indicating rigorous conduct — and demonstrated consistent results. Findings from observational studies of good quality, including those reviewed by the FDA for the regulatory approval of mifepristone, reported abortion success concordant with the results in the randomized trials. Substantial variation was noted in smaller observational studies that were generally of fair to poor quality.

Data reported here reflect those of studies where recruited women were confirmed to be pregnant. The possibility of administering mifepristone and misoprostol proactively, meaning before menses is missed, was recently explored in a study from China [14]. The Chinese investigators administered mifepristone (50-mg dose) and misoprostol the day prior to expected menses for women not on contraception and not desiring pregnancy. Of 678 women who followed the regimen, 158 were found to be pregnant by hCG which was analyzed retrospectively. Success was high among those found to be pregnant, with only 2 (1.5%) having ongoing pregnancies.

Interpretation of the findings in this review should recognize the limitations of the data presented. Studies varied in many design elements, particularly in assessment and timing of the outcome of abortion, which makes comparing outcomes challenging. Inclusion criteria ranged across the studies from history of amenorrhea to transvaginal ultrasound. A wide range of doses and routes of misoprostol was also used, which may affect observed abortion success. Although a dose of mifepristone 200 mg was most commonly used among included studies, early ones used the original 600-mg dose and two Chinese studies used doses lower than 200 mg, which may also affect medical abortion success. Our main outcome, efficacy, as measured by complete abortion, was evaluated differently across studies. While most studies relied upon diagnostic ultrasound, completion was assessed at a wide range of time points. No single study was either randomized or powered to assess differences in complete abortion rates between pregnancies <42 days with other gestational ages. A comparison including pregnancies <35 days would be more informative of successful use at the time of missed menses; however, too few data exist to make a meaningful comparison, and even fewer exist for further parsing by gestational week.

The distinction between the comparison groups may be advantageous to the interpretation of these data. Some studies included pregnancies of 42 days' gestation in a ≤42-day group, and others included them in a 42–49-day group. This may have resulted in some misclassification bias at 42 days' gestation; however, the majority of subjects (82%) in the lower gestational age group were ≤35 days. Therefore, it is unlikely that subjects very close to the gestational age cutoff significantly influenced the outcome for either category.

Awaiting for visualization of a gestational sac on ultrasound before administration of early medical abortion has been a standard in many settings due to the concern for undiagnosed ectopic pregnancy, although WHO guidelines have not necessitated it [30]. As most studies in this review utilized transvaginal ultrasound for inclusion and excluded those with ectopic pregnancy, we were unable to assess ectopic rates in this analysis. However, the three studies that enrolled subjects without a visualized gestational sac reported few ectopic pregnancies [14,15,22]. When no gestational sac was present, the protocol for all three studies was to collect serial, serum hCG levels to confirm abortion completion. Initial serum hCG levels above the discriminatory zone or failure to decline precipitously was an indication to proceed with evaluation for ectopic pregnancy. No studies reported the relative success of medical abortion between those without a visualized gestational sac and those with a visualized sac <42 days' gestation.

Li et al. reported no ectopic pregnancies in a cohort of 2500 asymptomatic women enrolled with estimated gestational age of ≤35 days in one study [14]. In another study with similar inclusion criteria, there were three suspected, but no confirmed, ectopic pregnancies among 735 subjects [15]. When the two Li et al. studies are considered together, an estimated 1021 subjects underwent medical abortion with no visible gestational sac on transvaginal ultrasonography in a cohort with 98% follow-up. Schaff et al. reported confirmed ectopic pregnancy in 2 of 30 subjects and ongoing pregnancy of unknown location in a third, who underwent management with methotrexate [22]. This study enrolled subjects without an upper limit of estimated gestational age, but mean age was 40±9 days. One ectopic pregnancy was identified with initial hCG above the discriminatory zone (16,922 at 39 days amenorrhea) and the other with significant hCG rise following the abortion. The low proportion of ectopic pregnancy in the included studies is likely due to the criteria used for enrollment, including asymptomatic exam, and the low overall prevalence in the population of women seeking early abortion.

Despite variations between design and reporting in the included studies, this analysis supports the use of medical abortion at gestational ages <42 days. Efficacy rates are high overall and appear to reflect those observed during the seventh week of pregnancy. For women preferring to initiate

treatment as soon as the diagnosis of early pregnancy is made, delaying care is not indicated. Further research is needed to substantiate that this regimen would be as effective if used at the time of missed menses and to determine the appropriate clinical protocol for this scenario.

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