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CLINICAL ARTICLE

Acceptability and feasibility of medical abortion with mifepristone and misoprostol in Nigeria

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ABSTRACT

Objective: To examine the acceptability and feasibility of medical abortion in Nigeria. *Methods:* In total, 250 women who were eligible for legal pregnancy termination with a gestational age of up to 63 days since last menstrual period were enrolled in Benin City and Zaria between May 2005 and October 2006. Participants received 200 mg of oral mifepristone in the clinic and then took 400 μg of oral misoprostol 2 days later—choosing to either return to the clinic or take it at home. Women returned 2 weeks later for an assessment of abortion status. *Results:* The vast majority (96.3%) of women had successful complete abortions. Ultrasound was used to determine outcome in less than one-third (28.9%) of participants. Most women (83.2%) took the misoprostol at home. Almost all (96.2%) participants were satisfied or very satisfied with the abortion method. *Conclusion:* The introduction of medical abortion with mifepristone and misoprostol could greatly expand current method options and improve the quality of reproductive health care in Nigeria and other settings in which access to legal abortion services is limited.

1. Introduction

Unsafe abortion in Nigeria is a major public health problem and one of the main causes of maternal mortality and morbidity. Current estimates indicate that approximately 610 000 unsafe abortions occur annually in Nigeria [1], accounting for at least 13% (possibly 30%–40%) of maternal deaths each year [2]. Abortion in Nigeria is allowed only if the pregnancy threatens a woman's life. In addition to legal indications, safe abortion care is often sought after a woman has already attempted to abort using an unsafe method or provider [2]. Women in need of care should have access to the best and safest possible abortion technologies and services. Expanding the availability of medical abortion is especially important in settings in which access to legal abortion services is limited.

The majority of safe abortions performed in Nigeria are conducted via dilation and curettage or by manual vacuum aspiration [2]. Mifepristone is not registered for abortion in Nigeria, even though mifepristone plus misoprostol—a proven safe and non-surgical means of pregnancy termination—has been available in many countries for well over a decade [3–6]. In 2010, Nigeria added misoprostol to its Essential Medicines List for incomplete and spontaneous abortion [7]; furthermore, in a Nigerian study treating incomplete abortion with misoprostol, both women and clinicians were very satisfied with the method [8]. Introducing medical abortion with mifepristone and misoprostol in Nigeria could foster the expansion of the range of services currently available and improve service delivery. In addition, many women prefer medical over surgical abortion; reasons given often include avoiding surgery and/or avoiding pain [9–12]. Home administration of misoprostol is as safe and effective as clinic administration and is highly satisfactory to women [3,13,14]. It also reduces the number of clinic visits, which could lower the cost burden for both women and providers. Expanding choice in abortion services is an important step in improving the quality of reproductive health care in Nigeria.

The aim of the present study was to explore the acceptability of medical abortion for early-pregnancy termination in Nigeria using mifepristone followed by misoprostol 2 days later, and to examine the feasibility of home administration of misoprostol.

2. Materials and methods

The present study examined the acceptability and feasibility of a simplified medical abortion regimen in Nigeria between May 11, 2005, and October 1, 2006. Women eligible for legal termination of pregnancy presenting at 1 of the 2 sites (Women's Health and Research Centre in Benin City and Ahmadu Bello University Teaching Hospital in Zaria) were recruited for participation. Study eligibility included living or working within a reasonable distance of the study site; gestational age of up to 63 days since last menstrual period (determined via physical

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exam, menstrual history, and/or ultrasound); general good health, including absence of conditions contraindicating the use of mifepristone and misoprostol for pregnancy termination; and willingness to provide an address and/or telephone number for purposes of follow-up. Physicians at each site had prior experience with misoprostol, using it for treatment of first- and second-trimester incomplete abortion. Study approval was provided by the ethical review committees at the University of Benin and Ahmadu Bello University Teaching Hospital, and all participants gave written informed consent.

Participants received 200 mg of oral mifepristone in the clinic and then took 400 μg of oral misoprostol 2 days later—choosing to either return to the clinic or take it at home. They were also given mild analgesics (4 × 500-mg paracetamol tablets) to take as needed, as well as the cell phone number of a study nurse, who could be called with questions at any hour of the day. Participants were asked to return to the clinic 2 weeks after administering the regimen for an assessment of abortion status. Ultrasound was not part of the protocol but could be used at the clinician's discretion to determine outcome. Women with ongoing, viable pregnancies were offered surgical abortions. Women with nonviable pregnancies or incomplete abortions were offered either immediate surgical evacuation or the option of waiting another week. All women were asked to complete an exit interview at the end of the study to provide acceptability information about the abortion. Much of the care was handled by mid-level clinicians; at the Women's Health and Research Centre, treatment and follow-up were provided exclusively by a nurse–midwife.

The primary outcome of the study was method efficacy. Secondary outcomes included location of misoprostol administration, frequency and duration of adverse effects, and satisfaction with the method. Data were entered into SPSS version 14.0 (IBM, Armonk, NY, USA), and all analyses were conducted using STATA version 11 (StataCorp, College Station, TX, USA).

3. Results

In total, 250 women were enrolled in the study. Fifty-nine (23.6%) women were lost to follow-up and, thus, were included only in demographic analyses. Participant characteristics are presented in Table 1.

Successful abortion was recorded for most (96.3%) participants (Table 2). Of the 7 (3.7%) women who underwent surgical intervention, 2 had an ongoing pregnancy, 3 had an incomplete abortion, and 2 requested intervention prior to study completion. Ultrasound was used to determine outcome for less than one-third (28.9%) of participants; it was used more frequently at the Zaria site than at the Benin City site (51.9% vs 24.7%; data not shown). Most women (159/191 [83.2%]) chose to take the misoprostol at home. (Of the 59 women for whom follow-up data were unavailable, 52 planned to take the misoprostol at home, 6 planned to take it at the clinic, and 1 did not specify; data not shown.) There were no significant differences in outcome according to location of misoprostol administration. Twenty-eight (11.2%) women made an unscheduled visit to the clinic and 46 (18.4%) called the clinic during the study. Reasons for unscheduled visits included heavy bleeding, cramping, vomiting, and anxiety. Most of the women with outcome data who made unscheduled visits (25/28 [89.3%]) and/or who called the clinic (42/46 [91.3%]) had successful abortions (data not shown). There were no serious adverse events (e.g. hospital admissions or blood transfusions) noted for any of the participants.

Women reported an average of 6.7 days of bleeding (3.3 days of heavy bleeding, 2.5 days of normal bleeding, and 0.9 days of spotting) (Table 3). Close to two-thirds of participants (62.0%) reported pain, while approximately one-quarter reported nausea or vomiting (26.1% and 26.6%, respectively); 12.5% reported fever/chills.

Table 1
Participant characteristics (n = 250).

Characteristic	No. (%)
Age, y (n = 220)	
<20	22 (10.0)
20–29	172 (78.2)
30–39	25 (11.4)
≥40	1 (0.5)
Gravidity (n = 170)	
0	37 (21.8)
1	51 (30.0)
2	36 (21.2)
≥3	46 (27.1)
Previous spontaneous abortion (n = 101)	
0	51 (50.5)
1	30 (29.7)
≥2	20 (19.8)
Gestational age, d (n = 210)	
<43	98 (46.7)
43–49	30 (14.3)
50–56	26 (12.4)
57–63	56 (26.7)
Education completed (n = 178)	
Less than secondary school (below grade 11)	67 (37.6)
Secondary school/A-levels (grade 11–13)	27 (15.2)
Some university or higher (grade 14 or higher)	84 (47.2)

Table 2
Outcomes (n = 250).

Outcome	No. (%)
Success (n = 191)[a]	184 (96.3)
Surgical intervention (n = 191)[a]	7 (3.7)
Ongoing pregnancy (n = 191)[a]	2 (1.0)
Incomplete abortion/retained products of conception (n = 191)[a]	3 (1.6)
Woman's request (n = 191)[a]	2 (1.0)
Ultrasound used to determine outcome at follow-up (n = 173)[a,b]	50 (28.9)
Misoprostol taken at home (n = 191)[a]	159 (83.2)
Women who made an unscheduled visit[c]	28 (11.2)
Women who called the clinic[d]	46 (18.4)

[a] Fifty-nine women lost to follow-up.
[b] Data not available for 18 women.
[c] Seventeen women had 1 unscheduled visit; 10 women had 2 unscheduled visits; 1 woman had 3 unscheduled visits.
[d] Twenty-five women made 1 call to the clinic; 13 women made 2 calls to the clinic; 8 women made 3 or more calls to the clinic.

Table 3
Bleeding and adverse effects reported by women on the take-home card (n = 184).[a,b]

	Value
Heavy bleeding[c]	
No. of women	160 (87.0)
No. of days	3.3 ± 2.3 (0–12)
Normal bleeding[c]	
No. of women	106 (57.6)
No. of days	2.5 ± 2.8 (0–12)
Spotting[c]	
No. of women	77 (41.8)
No. of days	0.9 ± 1.5 (0–7)
Pain	
No. of women	114 (62.0)
No. of days	1.5 ± 1.5 (0–5)
Nausea	
No. of women	48 (26.1)
No. of days	0.4 ± 0.9 (0–4)
Vomiting	
No. of women	49 (26.6)
No. of days	0.4 ± 0.7 (0–3)
Fever/chills	
No. of women	23 (12.5)
No. of days	0.3 ± 1.0 (0–7)

[a] Values are given as number (percentage) or mean ± SD (range).
[b] Of the 191 women who returned for follow-up, 184 provided their "Side Effect" cards.
[c] Of the 184 women, 8 (7 successes and 1 with intervention) did not report any bleeding adverse effects.