Prospective study of medical abortion in Nepal Medical College Teaching Hospital (NMCTH) A one year experience

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ABSTRACT

A combination of antiprogesterone mifepristone and prostaglandin analogue misoprostol provides an effective non surgical method for termination of pregnancy upto gestational age of 63 days. The objective of this study was to assess the efficacy of this medical regimen for termination of pregnancy upto 63 days of pregnancy. A hospital based prospective study was carried out in department of obstetrics and gynecology at Nepal Medical College Teaching Hospital (NMCTH) for a period of one year where 100 women requesting for medical abortion were enrolled. The medical regimen used was mifepristone 200 mg orally followed 24 hours later by misoprostol 800 micrograms administered buccally. Most of the women were in age group 20-29 years (50%), were nulliparous (81%) and were within 42 days of pregnancy (47%). The overall success rate of this regimen was 93.6%. Where success was defined as achieving complete abortion without needing surgical evacuation. Surgical evacuation was needed in 6 (6.4%) patients i.e. 5 for incomplete abortion and one for continued viable pregnancy. The combination of oral mifepristone 200mg followed 24 hours later by buccal misoprostol 800mcg is effective method of medical termination of pregnancy.

Keywords: Medical abortion, mifepristone, misoprostol.

INTRODUCTION

Termination of pregnancy has been practiced since antiquity. The most widely used method for terminating pregnancy early in the first trimester is surgical primarily vacuum aspiration. Medical abortion promises a new nonsurgical option to women seeking early pregnancy termination.

An estimated 26 million pregnancies are terminated legally each year throughout the world and 20 million are terminated illegally with more than 78 thousand deaths.[1] Unsafe abortions especially in developing countries like Nepal is one of the leading cause of maternal mortality. According to the Ministry of Health, maternal mortality and morbidity study in 1998, unsafe abortion is responsible for 5.4% of all maternal deaths in Nepal.[2]

Women often resort to unsafe abortion as the abortion services are not always readily available and accessible. Even in the most developed country of the world like United States, which has the highest abortion rate, yet in 1995 approximately 86% of the US counties had no abortion providers or facilities.[3]

The availability of acceptable, safe drugs for termination of pregnancy would be of immeasurable value for women and the medical profession. A safe medical method would save many lives. Medical termination using antiprogesterone mifepristone in combination with a prostaglandin analogue misoprostol is acceptable to women, has a low complication rate and results in complete abortion in 95 to 97.5% of cases.[4-5] Various medical regimen have been used but those with most favourable result involve administration of mifepristone 200 mg orally followed 36 – 48 hours later by misoprostol 800micrograms vaginally. Here, we report our experience with an alternative regimen comprising mifepristone 200 mg orally followed 24 hours later by misoprostol 800 micrograms buccally.

The objective of this study was to see the efficacy of the above mentioned regimen.

MATERIALS AND METHODS

This is a hospital based prospective study conducted in department of obstetrics and gynecology at Nepal medical college and teaching hospital. This study was conducted over period of one year from February 2010 to January 2011. All women attending gynecology OPD requesting for medical termination of pregnancy were screened. Women with gestational age less than 63 days and with no known contraindications to mifepristone and misoprostol were enrolled in the study. The assessment of gestational age was based on menstrual history and bimanual examination of uterus and where

Table-1: Age of the women

Age (in years)	n. (%)
≤19	9 (9)
20-29	50 (50)
30-39	38 (38)
40-49	3 (3)

in doubt ultrasonography was performed. All the patients were informed about the method of medical abortion, its success and failure rate and possible complications associated. They were also informed that if it failed, they could proceed for surgical treatment anytime. Written informed consent was obtained from all the patients undergoing the procedure. These women were given 24 hours contact number and asked to contact staff if there were any concerns and complication.

Oral mifepristone 200mg was given on the same day in the clinic. All the women were given 800microgram of misoprostol buccally exactly 24 hours after mifepristone administration and allowed to go home. The participants were advised to attend follow up clinic within 10 days of misoprostol administration. Complete abortion was diagnosed clinically with history of expulsion of product of conception, bimanual examination of uterus and with pelvic ultrasound when uterine cavity was found to be empty. If termination process was complete, they were discharged from any further follow up.

If incomplete abortion was diagnosed, women were further managed with suction and evacuation. Woman with continuing viable pregnancy was also managed with surgical evacuation.

Successful medical abortion was defined as the termination of pregnancy with complete expulsion of the fetus without need for surgical evacuation.

RESULTS

The study was conducted over period of one year from February 2010 to January 2011. During the study period, 100 women with pregnancy of less than 63 days underwent medical termination. Baseline demography of the women recruited for the study and the overall success rate of this regimen were analyzed.

Women from all age group ranging from 17 to 43 years requested for medical termination of pregnancy. Maximum women (50%) were in the age group of 20-29 years (Table-1).

This table shows that maximum number of women requesting for medical termination were second gravida (30%). Medical termination rate was seen to be higher in multiparous women (81%) than in nullipatous (19%) Table-2.

The gestational age ranged from 32 days to 63 days with 47% of women at gestational age at or less than 42 days Table-3.

Among 100 women recruited for study, 95 came for follow up and 5 were lost to follow up. The outcome of 95 women undergoing medical termination is illustrated in table below.

Among these 95 women, 89(93.6%) women had successful termination of pregnancy with initial dose of mifepristone and misoprostol. The other 5 women had incomplete abortion and one had ongoing viable pregnancy and all were managed with surgical evacuation. So the efficacy of this regimen for termination of pregnancy is 93.6% Table-4.

None of the patient came to emergency due to heavy bleeding or any other complication and no serious adverse reaction was noted.

Table-2: Parity of the women

Gravida	n. (%)
Primi	19 (19)
G2	30 (30)
G3	17 (17)
G4	18 (18)
G5	10 (10)
G6	2 (2)
G7	4 (4)

DISCUSSION

This study has shown that 93.6% of women had successful medical termination after taking 200mg mifepristone followed 24 hours later by 800mcg of misoprostol buccally. This success rate is comparable to complete abortion rate of 92% as reported by Jensen *et al*,[6] 92.9% by Aubeny *et al*[7] and 98% by Fiala *et al*[8] where they used oral misoprostol 48 hours after mifepristone administration.

Similarly success rate of our study is comparable to that reported as 97.5% by Ashok *et al*,[9] 90.2% by Child *et*

Table-3: Gestational age

Gestational age (in days)	n. (%)
≤ 42	47 (47)
43 – 49	24 (24)
50 – 56	24 (24)
57 - 63	5 (5)

Table-4: Outcome of medical termination of pregnancy.

outcome	n. (%)
Complete abortion	89 (93.6)
Incomplete abortion	5 (5.3)
Continuing viable pregnancy	1 (1.05)

al,[10] 95% by El-Refaey *et al*[11] and 96% by Guest *et al*[12] where they used misoprostol 800mcg vaginally 48 hours after mifepristone administration.

In this study one woman (1.05%) had continuing viable pregnancy following medical termination which was recognized and managed with surgical method. The ongoing pregnancy rate in this study is comparable to 0.9% as reported by Child *et al*,[10]1% as by Guest *et al*[12] and as 1.6% by Gomperts *et al*.[13] The ongoing pregnancy rate in our study is lower than 3% as stated by Thong *et al*[14] and 4% as reported by Harper *et al*.[15]

In all the above mentioned studies, misoprostol 800mcg was used either vaginally or orally but 48 hours after mifepristone administration. But in our study, we used misoprotol 800mcg buccally 24 hours after mifepristone administration. The success rate of 93.6% of this regimen is comparable to all the studies discussed above. The continuing pregnancy rate was also low and no serious adverse reaction was noted. No patient came to emergency due to heavy bleeding or any other complications.

Thus we can conclude that this regimen of mifepristone and misoprostol is equally effective and efficacious method of termination of pregnancy where patients do not have to wait for 48 hours for the process to get completed.

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