Medical Abortion-An Alternative to Surgical Abortion

Lt Col K Kapur*, Gp Capt GS Joneja⁺, Lt Col M Biswas[#]

Abstract

Background: Termination of early pregnancy has traditionally been done surgically, but agents are now available which can terminate pregnancy if taken orally, vaginally or parenterally. We have used a combination of mifepristone and misoprostol for termination of early pregnancy.

Material and Method: Fifty patients having amenorrhoea of upto 56 days with confirmed intrauterine pregnancy, were selected for medical termination of pregnancy. The patients were given tablet mifepristone (200mg) on day 1 and tablet misoprostol (400mcg) on day 3. On day 14, an ultrasound was done to confirm complete abortion.

Result: Majority 35 (70%) patients had amenorrhoea between 40 – 50 days. The duration of bleeding was less than 5 days in 12%, between 5 – 10 days in 56%, 10 – 13 days in 16% and greater than 14 days in 16%. In all patients with bleeding of more than 14 days ultrasonography confirmed intrauterine products & a suction evacuation was done. In this series there were no failures.

Conclusion : The combination of mifepristone and misoprostol is an effective method for termination of early pregnancy up to 56 days of amenorrhoea.

MJAFI 2006; 62 : 351-353

Key Words: Medical abortion

Introduction

With the ever-increasing world population, termination of pregnancy or indicated abortion is a subject no country can do without. In fact with the present knowledge no country in the world can reduce its population growth without recourse to pregnancy termination and world wide, induced abortion is the third commonest means of fertility control next to sterilisation and oral contraceptives [1].

For many years termination of early pregnancy has been done surgically using vacuum aspiration but now agents are available which can terminate pregnancy if taken orally/ vaginally or parenterally obviating the need for the surgical procedures thus reducing the complications of the procedure.

Antiprogesterone drugs such as mifepristone (RU 486), prostaglandins like misoprostol have been approved by the United States Food & Drug Administration for termination of pregnancy [2]. Anti-mitotic drugs such as methotrexate have also been used for pregnancy termination.

We have used a combination of mifepristone and misoprostol for termination of pregnancy in this study.

Material and Method

Fifty patients attending the gynaecology out patient

department between November 2002 and August 2004, who came for medical termination of pregnancy (MTP) only, were selected for termination of pregnancy using drugs. All the patients were given a choice of having the MTP done surgically by suction and evacuation or by medical means. Patients were enrolled for termination of pregnancy with drugs after obtaining consent.

A clinical examination, urine test for pregnancy and an ultrasound examination for confirmation of intra uterine pregnancy along with the exact gestational age of the foetus was done in all cases. Patients with amenorrhoea of less than 56 days and a gestational age of less than 8 weeks on ultrasonography (USG), were taken up for the procedure.

After taking formal consent the patients were given one tablet of mifepristone (200mg) on 1st day orally and this was followed by two tablets of misoprostol (400 microgm) orally on 3rd day. Few patients had spotting after taking tablet mifepristone, but all patients had bleeding after they took tablet misoprostol. The bleeding, which was akin to a heavy menstrual period and associated with passage of clots lasted for about 4 – 14 days in majority with heavy bleeding lasting for 1 – 2 days only in most. On 14th day, a transvaginal ultrasound was done to confirm complete abortion. However, if the patient had persistent bleeding or evidence of intrauterine products, she was taken up for a suction evacuation under local anaesthesia.

Results

The age distribution of the patients is shown in Table 1,

*Classified Specialist (Obs & Gyn) & Endoscopic Surgeon, ⁺Senior Advisor (Obs & Gyn), [#]Classified Specialist (Obs & Gyn) & Gyn Oncologist, Army Hospital (R & R), Delhi Cantt.

Table 1**Age of the patients**

Age of patients	Number of patients	Percentage (%)
<25 years	07	14
25-30 years	22	44
30-35 years	19	38
35-40 years	02	04
Total	50	100

Table 2**Duration of amenorrhoea of patients**

Days of amenorrhoea	Number of patients	Percentage (%)
37-40	08	16
41-50	35	70
51-56	07	14
Total	50	100

the duration of amenorrhoea in Table 2, the duration of bleeding in Table 3 and the duration of bleeding vs amenorrhoea is shown in Table 4.

It was seen that as the duration of amenorrhoea increased so did the number of days of bleeding. In all patients who had persistent bleeding after 14 days, the bleeding was minimal but USG showed evidence of intra uterine contents. Of the eight patients in this category four were taken up for suction and evacuation immediately. In other four patients, in whom the bleeding was just spotting and intra uterine contents were minimal the patients were left alone for 7 days under antibiotic cover but bleeding persisted and the patients had to be taken up for suction and evacuation under local anaesthesia. In one patient the bleeding persisted in spite of suction and evacuation under local anaesthesia and she was taken up for suction and evacuation under general anaesthesia.

Discussion

The incidence of induced abortion is not definitely known because estimates of illegal abortions are generally unreliable. It was estimated in 1995 that about 180 million pregnancies occurred each year world wide of which one fourth ended in induced abortion (26 million legal and 20 million illegal).

Vacuum aspiration (mechanical or electrical) was the most popular method of doing first trimester abortions till recently when abortifacient agents such as antiprogesterone (Mifepristone) and prostaglandins (Misoprostol) were approved by United States Food & Drug Administration in 2000 for first trimester abortions [2]. The drug controller of India has approved the use of Mifepristone/ Misoprostol combination for medical abortion up to 49 days amenorrhoea in 2002.

Mifepristone acts in several ways but its main action is to block the action of progesterone, a hormone necessary to sustain pregnancy and misoprostol causes

Table 3**Duration of bleeding**

Days	Number of patients	Percentage (%)
<5	06	12
5-10	28	56
11-13	08	16
>14	08	16

Table 4**Duration of bleeding versus days of amenorrhoea**

Days of bleeding	Number of patients	Average amenorrhoea (days)
<5	06	40
5-10	28	45
11-13	08	50
>14	08	52

uterine contractions, which expels the foetus & other products of conception [2].

There are certain advantages and disadvantages of surgical and medical methods of inducing abortion. The main advantages of medical abortions are that surgical & anaesthetic risks are avoided & the procedure is less painful than surgical abortion under local anaesthesia. The disadvantages of medical abortion are that it requires longer period for completion, multiple visits & it is not available after certain period of amenorrhoea [3].

Initially when mifepristone was approved for first trimester abortions, a higher dose of 600mg was recommended. However, similar results have been achieved with a much lower dose of 200mg [4,5]. In this study we have used a lower dose of 200mg mifepristone.

Initially there were concerns about the use of this method in India as the cost of mifepristone was high but now with the lower dose being used and each tablet costing approximately Rs 320/- this method is found to be cost effective. Indeed medical abortion can be done safely, effectively and acceptably in the outpatient family planning department of urban and rural hospital of India [6].

Various regimes and drug combinations have been used for inducing first trimester abortions but a combination of mifepristone and misoprostol has been found to be effective for medical abortion upto 63 days in 95 – 98% cases [7]. Misoprostol can be administered both orally or vaginally, however gastrointestinal side effects with oral administration are more [7]. In a study it has been observed that for amenorrhoea of > 57 days, vaginal misoprostol is more effective than oral administration, however no difference in efficacy was observed when amenorrhoea was < 57 days [8]. In our

study as amenorrhoea was < 57 days, the oral route was chosen, as it is more patient friendly. In another study [9] it was shown that although vaginal misoprostol was slightly more effective than the oral route at inducing medical abortion, the differences in side effects were minimal and women preferred the oral route.

We found that bleeding starts within few hours of taking the misoprostol tablet and the total bleeding is like a heavy period associated with minimal abdominal discomfort, which responds to paracetamol. Non steroidal antiinflammatory drugs (NSAIDs) should be avoided, due to their anti prostaglandin action. Other workers have also found that bleeding by medical abortion is not very different from that of bleeding by vacuum aspiration [3]. In our study, no patient had bleeding heavy enough to require blood transfusion, but in a study of 80,000 patients over 18 months, 13 patients required blood transfusion [10]. In the same study, the pregnancy continued in 0.06% cases and in 0.05% cases vacuum aspiration was required for incomplete abortion. In our study there was no case where pregnancy continued but vacuum aspiration was done for incomplete in 8 out of 50 patients (16%). Minimal products were removed by vacuum aspiration and the procedure was much simpler than a formal suction & evacuation for medical termination of pregnancy. The high number of patients requiring suction and evacuation can be ascribed to the fact that this procedure is new to us and the number of cases few. However, other workers have reported rates of 2 – 10% which require surgical abortion [3]. With increasing experience and modification of the dosage of drugs, it may be possible to reduce the rate of incomplete abortion.

At the end of 14 days a trans vaginal ultra sound was done and it was found to be effective in predicting completeness of the abortion. The same conclusion has also been drawn by other workers [11]. We found that the amount of bleeding and incidence of incomplete abortion increased with the rise in the number of days of amenorrhoea in our series which is similar to other studies[3]. There were no significant complications or side effects of drugs. Only one patient required suction and evacuation under general anaesthesia.

There have been studies comparing medical versus surgical abortion, but it is important to point out that

medical abortion will not be a replacement but an alternative to surgical abortion and ideally both the methods should be available to the women for the choice of procedure [12]. In conclusion, a combination of mifepristone and misoprostol is an effective method of inducing first trimester abortions up to 56 days of amenorrhoea.

Conflicts of Interest

None identified

References

1. Chaudhuri SK, Pregnancy Termination. In: Chaudhuri S K, editor. Practice of Fertility Control. 5thed. London:Churchill Livingstone Pvt Ltd, 2001; 229-60.
2. Ellertson C, Waldman SN. The Mifepristone- Misoprostol regimen for early medical abortion. Curr Womens Health Rep 2001; 1:184-90.
3. Trupin S R, Moreno C. Medical Abortion: Overview & Management. Medscape Womens Health 2001; 6: 4.
4. Kulier R, Gulmezoglu AM, Hofmeyer GJ, Chang L N, Campana A. Medical Methods for First Trimester Abortion. Cochrane Database Syst Rev 2004; CD002855.
5. Mittal S, editor. Consortium on National consensus for Medical abortion in India. Proceedings & Recommendations 2003; 2.2.2; 122-3.
6. Coyaji K, Elul B, Krishna U, et al. Mifepristone- Misoprostol abortion: a trial in rural & urban Maharashtra, India. Contraception 2002; 66: 33-40.
7. Tang O S, Chan C C, Lee S W, et al. A prospective, randomised placebo controlled trial on the use of Mifepristone with sublingual or vaginal Misoprostol for medical abortions of less than 9 weeks gestation. Hum Reprod 2003; 18: 2315-8.
8. Von Hertzen H, Honkannon H, Piaggio G, et al. WHO multinational study of three Misoprostol regimens after Mifepristone for early medical abortion. BJOG 2003; 110: 808-18.
9. Schaff E A, Fielding S L, Westhoff C. Randomised trial of oral versus vaginal Misoprostol at one day after Mifepristone for early medical abortion. Contraception 2001; 64: 81-5.
10. Hausknecht R. Mifepristone & Misoprostol for early medical abortion: 18 months experience in United States. Contraception 2003; 67: 463-5.
11. Acharya G, Haug M, Brathen A, Nilsen I, Maltau J M. Role of routine ultrasonography in monitoring the outcome of medical abortion in a clinical setting. Acta Obstet Gynecol Scand 2004; 83: 390-4.
12. Bygdeman M, Danielson KG. Options for early therapeutic abortion: a comparative review. Drugs 2002; 62: 2459-70.