Original Article

The use of misoprostol alone in medical evacuation of embryonic demise

Lakshmi Rao C V[1*], Rajeswari B[2], Mounika M[3], Varsha M[4]

[1]Associate Professor, [2]Senior Assistant Professor, [3,4]Department of Obstetrics and Gynecology, Gandhi Medical College, Secunderabad, Telangana, INDIA.
Email: subbalakshmi.cv @gmail.com

Abstract

Aim: To evaluate a medical method of managing embryonic /fetal demise in early pregnancy (missed abortion). **Objectives:** (1) To study feasibility of medical treatment of missed abortion up to 13 weeks of amenorrhea. (2) To study the side effects of vaginal misoprostol (maximum dose of 800 mcg)in women with missed abortion and record the success rate and advantages over surgical method of evacuation. **Methodology:** A prospective observational study of 119 consecutive admissions of missed abortion were managed by using misoprostol tablets vaginally. All the 119 women of missed abortion confirmed by ultrasound were counselled and informed about the medical method. A tablet of 200 mcgms of misoprostol was inserted deep in the vagina every 4 hours for a maximum of 4 doses. Women were observed for side effects, and symptoms and for signs of abortion. All the women were followed with checkups up to 2 weeks after evacuation or as need arised. **Results:** Success rate was 95.23%. Complete abortion rate was 88.09%. There were no febrile complications and no other untoward side effects. The method has many advantages over surgical methods. **Conclusion:** Misoprostol is an effective method of evacuating the uterus with missed abortion.
Keywords: Early pregnancy failure(EPF), Embryonic/Fetal demise,Misoprostol, Missed abortion.

[*]**Address for Correspondence:**
Dr. Lakshmi Rao, Sri Sai Nivas, Plot 21, Bhagyalakshminagar, Kavadiguda, Gandhinagar, Hyderabad-500080, Andhra Pradesh, INDIA.
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INTRODUCTION

Early pregnancy failure (EPF) can be devastating for women and their partners and is as much a cause of worry for the gynecologist. EPF is an inclusive term that comprises complete, incomplete, inevitable, spontaneous abortion, embryonic demise (missed abortion), and anembryonic gestation (blighted ovum) at less than 14 weeks of amenorrhoea. Approximately 15-20%of clinically recognized pregnancies end up in early pregnancy failure (EPF).Embryonic or fetal demise previously termed as missed abortion describes the failure of a previously identified embryo to grow or show cardiac activity, or the absence of cardiac motion in embryos above 5 mm[1.] The gynecologists concern is deciding the method of terminating the pregnancy, the problems are because of closed cervix, bulk of products, and the possibility of adherence of products to the uterine wall. This adherence increases the chance of incomplete evacuation and uterine perforation[2].The standard management of missed abortion used to be surgical evacuation of the uterus but medical methods of management are now becoming reasonable alternatives in clinical practice[3] Non- surgical methods of terminating pregnancy using prostaglandins by various routes following administration of progesterone antagonists are successful in early gestation. Use of prostaglandins alone in missed abortion, without progesterone antagonists, is logicalbecause death of the concept us brings about natural fall in progesterone level[4].There are reports of use of vaginal misoprostol alone for abortion and of claims that it is better than oral misoprostol[5.] Use of medical methods is expected to bring about gradual non-traumatic dilatation of the cervix, separation of products, and their expulsion. Few cases might require surgical evacuation to remove retained products. However, this becomes safe and easy, because of open cervix, separated products, and thick contracted myometrium. We present our experience of treating 119 women with ultrasonographically

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diagnosed missed abortion between 6-18 weeks gestation, by vaginal administration of misoprostol alone.

MATERIAL AND METHODS

The study included 119 consecutive admissions, of women with missed abortion, to Gandhi Medical College and Hospital, Secunderabad, a tertiary care center, between a period of 18 months, i.e. from June 1st2013 to December 31st 2014.Informed written consent was taken from all patients and ethical clearance was taken from the Ethics Clearance Committee of Gandhi Medical College, Secunderabad, which is affiliated to the NTR University of Health Sciences, Vijayawada. A prospective observational study was carried out on all these patients. Patients complaining of bleeding p/v with amenorrhea, and patients with a routine, first trimester, diagnostic ultrasonography demonstrating fetal demise, were, after admission to the hospital, taken for a second ultrasound for confirmation of diagnosis. The size of gestation sac, the crown- rump length(CRL), if present were measured, and the sonographic age of pregnancy was estimated and contrasted to the age calculated from the LMP(last menstrual period).Thereafter every woman was explained the medical method of pregnancy termination and her consent was taken. The prostaglandin used to initiate uterine activity was misoprostol. One tablet of 200mcg misoprostol soaked in normal saline was placed in the posterior fornix of the vagina and this was repeated every 4 hours for a maximum of 4 doses. The patients were instructed to report either cramps and /or bleeding. If the patient aborted earlier, further doses were not administered. As all patients were in hospital, they were monitored for pulse, BP, respiratory rate, abdominal cramps, vaginal bleeding and expulsion of products of conception. Completeness of abortion was declared after speculum, vaginal, and ultrasound examinations. In case of failure to abort or incomplete abortion, dilatation and evacuation, under anesthesia, was performed according to the standard clinical practice. Patients were observed for 6 hours after complete abortion or surgical evacuation and were discharged the next day. All patients received antibiotic cover of 500 mg IM, parenteral Ampicillin, 6th hourly. All patients were asked to report if bleeding did not cease within 5 days, or ifit increased, or if they experienced cramps or fever. They were asked to return for check up a week later.

RESULTS

The characteristics of patients and results are shown in TABLE1. Cumulative abortion rate is shown in FIGURE 1.

Table 1: Characteristics of patients and results

Characteristics	Characteristics	
1	Mean Age (Years)	25.8+_5.25
2	Mean Gravidity	2.63+_1.06
3	Mean Parity	1.89+_1.12
4	Mean Gestational Age(Weeks)	9.4+_2.30
5	Mean Dose Of Misoprostolin Micrograms	461.90+_2.05
6	Induction-Expulsion Interval	7.17+_3.60
7	Complete Abortion	105 CASES
8	Incomplete Abortion	8 CASES
9	Failure To Abort	6 CASES
10	Side Effects (Nausea and Vomiting)	8 CASES

One hundred and thirteen (113) women aborted, 105 completely and 8 incompletely, giving a success rate of 95.23%.The complete abortion rate was 88.09% (105/119).All the 8 women with incomplete abortion (8/113—7.07%) were managed by evacuation under anesthesia. Six (6/119—5.04%) women failed to abort and underwent dilatation and evacuation under anesthesia. The average induction abortion interval was 7 hours 13 minutes with a range from 3 hours 20 minutes to 15 hours 40 minutes. Only 14 (11.7%) women required a fourth tablet since they had not aborted at the end of 12 hours. Side effects observed were nausea and vomiting in 8 cases.

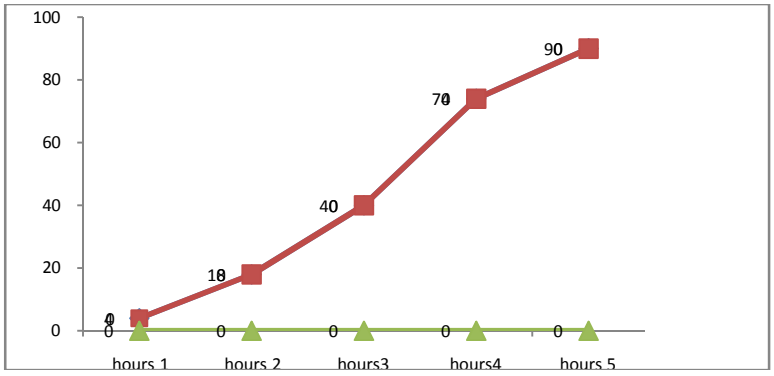

Figure 1: Cumulative Abortion Rate

DISCUSSION

Medical methods of terminating early pregnancy usually involve administering some agents to reduce the levels of prostaglandins and then giving uterotonics to bring about contractions of sensitized myometrium. Our results support the fact that antiprogestogens are not really necessary for medical termination of missed abortion, probably because progesterone levels are usually low, and therefore only prostaglandinsare required to initiate uterine contractions and expulsion of gestation sac. Our study demonstrates that vaginal administration of misoprostol is very effective. This may be because of higher uterine levels of misoprostol due to direct absorption from posterior fornix and local effect of misoprostol on uterine cervix. Zalanyi, and Thomas and Habeebullah, have successfully managed missed abortionsmedically without progesterone antagonist[6] Lee *et al* also indicatethat the medical treatment of missed abortion with misoprostol is psychologically safe, and has higher client acceptance and satisfaction rate[3].

CONCLUSION

Vaginal prostaglandins is a safe, effective and economic method of treating missed abortion. Medical method avoids complications related to intra uterine instrumentation, and saves expenditure on operation theatre and anesthesia. Since only 11.7% (14) women required a fourth dose of misoprostol, it can be concluded that a maximum dose of 600 mcg should be recommended and it also seems to be very important to note that mifepristone is not absolutely necessary for the success fulmedical treatment of missed abortion.

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