

EFFICACY OF SINGLE DOSE OF 800 μ g OF MISOPROSTOL IN FIRST TRIMESTER ABORTION

Shanti Subedi

Abstract:

Objective: To assess the efficacy, safety and cost effectiveness of Misoprostol (Prostaglandin E1 analogue) as a single dose of 800 μ g in first trimester abortion

Methods: A descriptive study was conducted in Nobel Medical College and Teaching Hospital from June 2010-June 2011 where 110 patients were enrolled for first trimester abortions including incomplete, missed, blighted ovum. Each woman received a single dose of 800 μ g of Misoprostol intravaginally and the the process of abortion was monitored to assess the outcome measures.

Results: Successful abortion was seen in 102 patients (92.7%) with induction to delivery interval of < 24 hours and the remaining 8 (7.2%) of them had to undergo surgical evacuation. Side effects noted were lower abdominal pain, fever, nausea, vomiting, and diarrhoea. Mean hospital stay of the patients was 48 hours.

Conclusion: Misoprostol is a safe, cost effective and efficacious drug for first trimester abortion even as a single dosage.

Key words: Misoprostol, abortion, uterine curettage

Introduction:

Termination of pregnancy for various maternal as well as foetal indications is a common problem. The rate of maternal mortality and morbidity increases significantly by surgical methods for termination of pregnancy as compared to medical means.

Misoprostol, Prostaglandin E1 analogue was previously widely used for prevention and treatment of gastric ulcers and now an important drug for women's reproductive health. An increasing body of literature has shown that it can be used as labour induction and it also holds promise for other indications like cervical ripening, treatment and prevention of postpartum haemorrhage and treatment of spontaneous abortion. Finally there is a growing body of literature on misoprostol for its widespread use for termination of first trimester abortion. Several studies have

already been done to prove its efficacy till date.^{1,2}

Misoprostol is an appealing candidate as a medical method of early as well as second trimester abortion.^{3,4} It is available in many countries and very cost effective, easy to administer with minimal side effects. As the author could not find any such prototype study that might have explain the efficacy of Misoprostol among the female population living in eastern part of Nepal, this project is conducted with an objective to fulfil this lacunae.

Materials and methods:

This study was conducted in NMCTH from June2010-June 2011 where 110 patients were enrolled for first trimester abortion. A total of 110 patients with medical indications of abortion were included. Only inclusion criteria was

Original Article

hemodynamically stable first trimester abortion and exclusion criteria were-

1. Signs of pelvic infection and sepsis.
2. Cardiovascular disease
3. Bronchial Asthma
4. Known allergy to misoprostol and other prostaglandin
5. Hemodynamically unstable
6. Patients unable to give consents.

Subjects fulfilling the inclusive criteria were admitted in the labour ward of the hospital. After a detail interview and physical examination 800µg of misoprostol was administered to them intravaginally. Vigilant monitoring of the patient was done to avoid any of the complications.

The primary outcome measure was the successful abortion within 48 hours and the other outcome were induction to delivery interval, its complications and need for surgical evacuation. Surgical evacuation was needed in those with incomplete expulsion, excessive vaginal bleeding and it was done under paracervical block.

All the patient were kept in the hospital for at least 48 hours to assess the response and if they don't expelled the products of conception within that period, sonography was done after 2 weeks and uterine curettage performed if any retained products found.

In the case of heavy bleeding during the treatment 8 out of all enrolled in the study cases underwent curettage immediately but none of them required blood transfusion.

Results and Discussion:

In this study the successful abortion rate was 92.7% that too with a single dosage regimen intravaginally and this figure is

Misoprostol and abortion

higher than the figure reported by Fiala and Weeks, who reported a success rate of 87.5% with multiple dosages⁵. Success rate of 91.3% has been reported in a study done in tertiary centre of Nepal but that was combined with Mifepristone and the gestational age was only of 56 days⁶. Dose in this study was 400µg orally. Several clinical trials have evaluated the use of misoprostol alone for early pregnancy failure.^{7,8,9,10}

The success rate reported in the most of them 60-90% depending on the dose, mode and frequency of drug administration. A study reported by Szymanska et.al in 2003 had a success rate of only 30.3% but the dose they have used was only 400µg¹¹. Another study done by Thomas Betsy et al reported a success rate of 71.7% after a single dose and 76.7% after two doses, thus they were using 800ug but in divided doses¹². Success rate of 62% was observed by Sedigheh et al in 2008 with 800µg vaginally and success of 34% with second dose¹.

Conclusion:

Misoprostol is safe, cost effective and efficacious drug even as a single dose for first trimester abortion.

References:

1. **Sedigheh A, Fatemeh R, Naiereh K, and Mohamed S.** *Medical abortion at first trimester of pregnancy with misoprostol.* Saudi Med J. 2008; Dec: 29(12), 1739-1742.
2. **Bhattacharjee N, Saha SP, Ghoshroy SC, Bhowmik S, and Barui G.** *A randomized comparative study on sublingual versus vaginal administration of misoprostol for termination of pregnancy between 13-20 wks.* Aust NZJ. Obstet Gynaecol. 2008; April; 48(2):165-71.
3. **Blanchard K, Winikoff B, Kurus C, Nguyen T, and Nhu N.** *Misoprostol Alone- A new*

Original Article

- method of medical abortion?* Contraception. 1999; 59, 209-217
4. **Blanchard K, Winikoff B, and Ellertson C.** *Misoprostol use alone for the termination of early pregnancy. A review of the evidence.* Contraception. 1999; 59, 209-217
 5. **Fiala C and Weeks A.** *Misoprostol Dosage guidelines for Obstetrics and Gynecology.* 2005; 2-8
 6. **Karki C and Pokahrel H.** *Acceptability and feasibility of medical abortion in Nepal.* Int J. Gynaecol Obstet. 2009; Jul; 106 (1), 39-42
 7. **Jain JK, Harwood KR, Meckstoth, DR, and Mishell.** *Early pregnancy termination with vaginal misoprostol combined with loperamide and acetaminophen prophylaxis.* Contraception. 2001; 63; 217-221.
 8. **Wood, SL and Brain PH.** *Medical management of missed abortion; A*

Misoprostol and abortion

- Randomised Controlled trial, Obstet. Gynecol. 2002; 99; 563-566
9. **Prasartsakulchai, C and Tannirandorn YA.** *Comparison of Vaginal misoprostol 800ug versus 400ug in rearly pregnancy failure: A Randomised Controlled trial.* J. Med. Assoc.Thai. 200; 487,518-523.
 10. **Carbonell JLL, Velarco A, and Fernandez C.** *The use of misoprostol for termination of early pregnancy.* Contraception. 1997; 55, 165-168
 11. **Szymanska, M. Suchonska, B. Ziolkowaska and L. Bablok,** *Use of misoprostol in the termination of missed abortion.* Med. Wieku. Rozwoj. 2003; 307-317
 12. **Thomas B and Habeebullah S.** *Vaginal Misoprostol for Medical evacuation of early pregnancy failure.* J Obstet Gynecol Ind. 2004; 54: 340-342.

Correspondence Address: Dr.Shanti Subedi: Lecturer, Department of Gynaecology and Obstetrics, Nobel Medical College and Teaching Hospital, Biratnagar. **Address of correspondence: Dr.Shanti Subedi,** Lecturer, Department of Genecology and Obstetrics, NMCTH, Biratnagar. Phone no-9842021806.E-mail-drshantisubedi@yahoo.com