

# Undiagnosed Ectopic Pregnancy among Unsupervised use of Medical Abortion pills

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**Aims:** To identify and share the experience of clinical presentation and management of ectopic pregnancy (EP) in women who presented with unsupervised use of Medical abortion (MA) pills.

**Methods:** A prospective study was conducted in department of Obstetrics and Gynaecology of Civil Service Hospital over one year (March 2015- February 2016). Women with a history of unsupervised use of MA pills were taken into study group as there has been a trend of taking these pills without consultation in recent days. Detail clinical, menstrual, obstetrics and MA history were taken. Relevant investigations and Ultrasonography were done. Women diagnosed to have ectopic pregnancy were followed and their operative findings were recorded.

**Results:** Ninety-six women presented with unsupervised use of MA, among which 8 (8.33%) diagnosed to have EP. Most women were 20-30 years of age and 37.5% were unmarried. They gave history of taking MA from pharmacy. Among eight women, 37.5 % had taken MA at the period of gestation <5 weeks, 37.5% between 5-7 weeks and 25% >7-9 weeks. Fifty percent attended hospital after seventy- two hours of MA. Majority (50%) presented with lower abdominal pain and ruptured EP with hemoperitoneum (>one litre) requiring blood transfusion. History of easy availability and social reasons for MA intake were given by 37.5% each.

**Conclusions:** Even though medical abortion is easily accessible, affordable and available, it should also be safer. It is of utmost importance to take it from health facility or a registered medical practitioner following World Health Organization (WHO) guidelines, one of which is excluding extra-uterine pregnancy.

**Keywords:** ectopic pregnancy; medical abortion; supervision.

## INTRODUCTION

Medical abortion (MA) is a measure to reduce the maternal morbidity and mortality by decreasing unsafe abortion. This service has been started in Nepal since 2009.

WHO recommends medical abortion using 200 milligram(mg) of oral mifepristone followed by 800 microgram (mcg) of misoprostol vaginally, buccally or sublingually 24-48 hours later for termination of pregnancy up to nine weeks. WHO guidelines necessitate women requesting medical abortion to confirm pregnancy, estimate correct gestational age, locate site of pregnancy, rule out contraindications and it also recommends that the person or facility providing MA should have back up facility in case of complications. When the site of pregnancy is not confirmed prior to providing abortion service, the woman can land up in disaster with ruptured ectopic

pregnancy (EP) which is one of the leading cause of maternal morbidity and mortality. In fact, EP accounts for around 2% of all the pregnancies.<sup>2,3</sup> This study was done to highlight the importance of administration of MA under the supervision in a center approved for medical termination of pregnancy, after ruling out EP. Prior to providing MA simple bimanual examination or USG (trans-abdominal sonography /trans-vaginal sonography) can help avoid the morbidity and mortality related to EP which would otherwise be undetected.

## METHODS

This was the prospective study conducted in department of Obstetrics and Gynaecology of Civil Service Hospital of Nepal from March 2015 to February 2016 over a period of one year. All the women presenting to emergency and outpatient department with problems following the intake of MA pills from over the counter without any prescription of registered medical practitioner or health facility were taken into study group. Relevant data were collected with informed consent and entered in the proforma. Data was obtained regarding age, marital status, parity, period of gestation at which they had taken

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MA, counselling about MA, reason for taking MA, presenting complaints were recorded. Examination in emergency department or in outpatient department was done followed by relevant investigations. In all the women, USG was done. Those women who were diagnosed to have EP (ruptured/un-ruptured) were followed up till discharge. At laparotomy, their intra-operative findings were recorded. Need for blood and blood products either intra-operative period or post-operative period were also noted. Post-operatively they were followed up till suture removal and histopathological confirmation was done.

## RESULTS

In the study period, there were 96 women who presented in our hospital with MA related problems taken from over the counter. Among them, 8.33% (8/96) women were diagnosed to have EP. In fact, about one fourth (23.5%) of all EP (34) women gave history consuming MA pills. All the women belonged to reproductive age with maximum number between 20-30 years (75%) and youngest being 19 year and eldest being 33 year. Three of them were unmarried.

All these women gave history of confirmation of their pregnancy by urine pregnancy kit at home or at medical shop and purchasing MA from nearby shop by herself or male partner without any prescription. They had taken Mifepristone 200mg orally on first day and four tablets of misoprostol (200 mcg each) after 24 hours either orally or sublingually except one who had taken only two tabs after eighteen hours of mifepristone. None of them had visited a doctor or health facility for MA counselling.

**Table 1: Period of gestation at intake of MA pills**

POG (weeks)	Number( n=8)	Percentage (%)
< 5	3	37.5
5-7	3	37.5
7-9	2	25

Gestational age at the time of MA was calculated from last menstrual period. About 37.5 % cases had taken MA at the period of gestation <5 weeks and similar percent was observed between 5-7 weeks and only 2 (25%) cases had taken MA at 7-9 weeks of gestation.

Only one lady (12.5%) attended hospital within 24 hours of MA intake and majority (50%) attended hospital after seventy-two hours.

**Table 2: Presenting complaints**

Complaints	Number (n=8)	Percentage (%)
Pain abdomen with history of minimal per vaginal bleeding after taking MA	4	50
Mild pain abdomen and continuing per vaginal bleeding	3	37.5
Per vaginal bleeding only	1	12.5

Majority of women (50%) presented with complaints of lower abdominal pain of sudden onset to varying duration with minimal per vaginal bleeding after taking MA pills. There was one woman of on and off per vaginal bleeding and 3(37.5%) cases with both the complaints.

Most of the women, 62.5% (5) had significant amount of hemoperitoneum with adnexal mass of varying sizes and empty uterine cavity on ultrasonography. There was one woman with live embryo in adnexa and empty uterine cavity with collection in abdominal cavity. (Figure 1 and 2)

**Figure 1: USG finding of live embryo in right adnexa**



**Figure 2: USG finding of empty uterine cavity**





Only two women were found to have adnexal mass with clear gestational sac present of which one was detected by TVS.

**Table 3: Intra-operative finding: Hemoperitoneum**

Hemiperitoneum	Number (6)	Percentage (%)
< one liter	1	16.67
One to 2 liters	4	66.67
>two liters	1	16.67

\*Two cases went to other centers, so could not be followed up.

Maximum number of women (66.6%) had ruptured ectopic pregnancy in fallopian tube with hemoperitoneum ranging from 1000 to 2000 milliliter whereas one had about 2500 milliliter and the other had only 200 milliliters with tubal abortion. Two of the eight women refused for laparotomy in our hospital, so intra-operative findings and post-operative follow up were recorded only in six.

Intra-operatively and postoperatively, 4 (66.67%) women received four or more pints of blood transfusion, one woman received two pints and one did not require any blood transfusion.

Regarding reason for taking MA, 3(37.5%) women took it because of easy availability, 3 (37.5%) gave social reasons, one gave history of personal problem and the other one feared instrumentation in MVA.

## DISCUSSION

EP is a common cause of maternal morbidity and mortality in first trimester of pregnancy. Ruptured EP accounts for 10-15 % maternal deaths.<sup>4</sup> Diagnosis of EP is often difficult. Early diagnosis with prompt management decreases the maternal morbidity and mortality. This is challenging in a developing country like Nepal where limited resources (human, laboratory, technical) play a role for delay in diagnosis. Moreover, there are patient related problems leading to delay like social, financial, due to which EP is not diagnosed early. In recent days, women often procure abortifacients drugs from medical shops without prescription which further prevent prompt diagnosis. The 2011 Nepal Demographic and Health Survey showed that among the women who had an abortion in the five years preceding the survey, 19% had used tablets for their last abortion and 5% of them had obtained the tablets from a pharmacists or medicine shops.<sup>5</sup>

MA was initiated in Nepal since 2009. It is a safe and effective method of terminating early pregnancy,

provided the woman is properly educated and counselled for medical abortion discussing key points like pregnancy termination options, risk and benefits of medical abortion, known side effects, potential birth defects of the drugs, medical abortion process, need for multiple visits, contraceptive needs and contact in case of emergency.<sup>6,7</sup> WHO guidelines necessitate women requesting medical abortion to confirm pregnancy, estimate correct gestational age, and locate site of pregnancy as well and it also recommends that the person or facility providing MA should have back up facility in case of complications.<sup>1</sup> In this study also we came across 96 women who consumed MA from the chemist/pharmacist without prescriptions and 8.33% (8) of them were diagnosed to have EP (un-ruptured/ruptured). Slightly lower percent of EP has been reported as 6.5% by Giri et al<sup>8</sup>, 5.71% by Sharma R et al<sup>9</sup>, 5.4% by Thaker et al<sup>10</sup> and 1.15% by Bajwa SK et al<sup>11</sup>. A review of the published literature about medical abortion found that ectopic pregnancy went undetected in only 10 of every 44,789 women (0.02%) undergoing medical abortion if all guidelines were followed.<sup>12</sup> As none of our study population were provided MA with proper guidelines including counselling and examination prior to MA, the rate seemed increased. All of them had confirmed pregnancy but lacked in estimation of correct date and locate the site of pregnancy that lead to undetected ectopic pregnancy.

Maximum number of EP were observed in the age group of twenty to thirty and more than 50% were multiparous. It shows that women are opting for small family norm so they utilize the easiest possible way out to terminate the unplanned/unwanted pregnancy for which they choose medical shops found nearby.<sup>6</sup> There were 37.5 % women who were unmarried and self- administered MA; who had been diagnosed as EP. This is because these women refused to visit doctor or health facility because of social problems, feeling fear and embarrassment to attend medical advices. According to the national protocol MA is prescribed below nine weeks period of gestation, which has been done in our women but did not fulfill the guidelines.

Women with EP do not always present with stated clinical triad. In fifty percent of the cases, one or the other symptom may be missing.<sup>2,3</sup> Similar presenting symptoms were there in our study group.



USG play an important role in diagnosis of EP. It is the best modality of means to exclude extrauterine pregnancy as well as date pregnancy correctly prior to MA. Only performing pregnancy test prior to MA as done in our study group means risking the patient to EP. The symptoms of bleeding per vaginum and pain abdomen following MA mimicking abortion can lead to delayed presentation to a health facility or a doctor. Sometimes it might be too late to revive the patient. As observed in our study, more than 50% of women presented with significant hemoperitoneum detected in USG which was confirmed during laparotomy. Most of the women presented late after seventy-two hours of MA intake when they already had ruptured ectopic with significant hemoperitoneum. These women needed blood transfusion of around four pints. Timely diagnosis and management saved the life of these women. The morbidity could have been prevented, had it been diagnosed prior to MA. Use of sonography as the sole modality to establish the location of pregnancy in women before administration of MA has been previously debated by Fielding et al.<sup>13</sup> The authors concluded that clinicians felt confident in most cases of not using sonography for diagnosis of intrauterine gestation. So, bimanual examination is also effective method to exclude extra-uterine pregnancy.

We have observed the scenario in a tertiary care hospital whereas if we just think of rural part of Nepal where a pharmacist/chemist gives MA without examination, counselling regarding complications and chance of EP, probably we might be losing a

patient due to ectopic pregnancy rather than aborting an unwanted/unplanned pregnancy.

This could be just the tip of the iceberg, and the actual situation in general population may be worse. So, we need to bring about awareness in the part of health care providers, general population and pharmacist/chemist regarding MA. Health care providers should provide MA following WHO guidelines; general population should take it under supervision; pharmacist/chemist should provide MA with prescription only. Correct use of MA with guidelines will help reduce maternal morbidity and mortality of unsafe surgical abortions especially in developing countries like Nepal. Relatively small size of the study group is an important limitation of our study. A larger sample size and a case control/cohort study would be needed before any concrete conclusion can be drawn out of it. There is a need to undertake a prospective study with larger sample size in near future.

## CONCLUSIONS

Medical abortion has been legalized by government of Nepal to decrease the maternal morbidity and mortality resulting from unsafe abortions. It is of utmost importance to take it from health facility or a registered medical practitioner in order to rule out extra-uterine pregnancy prior to prescribing MA. Bimanual examination and if facility exists it is better to confirm location of pregnancy by USG beforehand rather than waiting for disaster to happen. Strict rules and regulations to be implemented to decrease the availability of MA over-the-counter in order to minimize undiagnosed EP and its adverse consequences.

## REFERENCES:

1. WHO. Safe abortion: technical and policy guidelines for health systems. 2nd edition 2012. Available from [www.who.int/reproductivehealth/publications/unsafe\\_abortion/9789241548434/en/-31k](http://www.who.int/reproductivehealth/publications/unsafe_abortion/9789241548434/en/-31k).
2. Debnath J, Gulati SK, Mathur A, Gupta R, Kumar N, Arora S et al. Ectopic Pregnancy in the Era of Medical Abortion: Are We Ready for It? Spectrum of Sonographic Findings and Our Experience in a Tertiary Care Service Hospital of India. *JOGI*. 2013; 63(6):388-93.
3. Sepilian VP, Wood A. Ectopic Pregnancy. *eMedicine, Obstetrics and Gynecology*. May 2010.
4. Lozeau AM, Potter B. Diagnosis and management of ectopic pregnancy. *Am Fam Physician*. 2005; 72:1707-14.
5. Nepal Demographic Health Survey (NDHS). Kathmandu: MOHP/FHD; 2011.
6. Ojha N, Bista KD. Situation analysis of women attending TU Teaching Hospital after medical abortion with problems and complications. *JNMA*. 2013;52(191):466-70.
7. Breitbart V. Counseling for medical abortion. *Am J Obstet Gynecol*. 2000;183(2):S26-S33.
8. Giri A, Srivastav VR, Suwal A, Sharma B. A Study of Complications following Selfadministration with Medical Abortion Pills. *NJOG*. 2015;19 (1):20-4.
9. Sharma R, Gupta M, Sharma S. Over the counter sale of abortion pills - time to act now. *Int J ReprodContraceptObstet Gynecol*. 2015;4(4):1053-6.
10. Thaker RV, Deliwala KJ, Shah PT. Self-medication of abortion pill: women's health in Jeopardy. *NHLJMS*. 2014;3:26-31.
11. Bajwa SK, Bajwa SS, Ghai GK, Singh N, Singh A, Goraya SPS. Medical abortion: is it a blessing or curse for the developing nations? *SLJOG*. 2011;33:84-90.
12. Shannon C, Brothers LP, Philip NM, Winikoff B. Infection after medical abortion: a review of the literature. *Contraception*. 2004;70(3):183-90.
13. Fielding SL, Schaff EA, Nam NY. Clinicians' perception of sonogram indication for mifepristone abortion up to 63 days. *Contraception*. 2002; 66:27-31.