

Self-administration of Abortion Pills and its Maternal Outcome in Tertiary Care Center

Neha Thakur¹, Ritu Shilp Verma² , Tripti Nagaria³

Received on: 17 January 2023; Accepted on: 03 February 2023; Published on: 11 May 2023

ABSTRACT

Background: Abortion service as medical healthcare facility is an essential service a woman needs. Despite well-developed medical service centers in our country and the legalization of abortion, the incidence of illegal and unsafe abortion has not come down. This study was carried out to analyze the complications following self-medication of abortion pills and to suggest measures to prevent such practice.

Methods: This was a retrospective observational study conducted in 125 women who came with history of (H/o) self-intake of abortion pills and presented at our hospital from January 2020 to December 2020.

Result: In this study, majority of participants who took self-abortion pills were between 21 and 25 years (36%) of age, and most of them (61.6%) had completed their higher secondary education. Nearly half of the study participants (49.6%) who presented to Obstetrics and Gynecology OPD or in the emergency department were with a history of 2–3 months of amenorrhea. Incomplete abortion was found in 97 (77.6%) patients. Instrumental evacuation was required in 30 (24%) patients. Twenty-three (18.4%) patients were severely anemic. Transfusion of blood was required in 38 (30.4%) patients.

Conclusion: Medical abortion is effective and safe when carried out under medical supervision. Unsupervised use of medical abortion pills is associated with many complications like incomplete abortion, rupture ectopic, and ruptured uterus. So, over-the-counter sale of medical abortion pills should be restricted.

Keywords: Complications, First trimester medical termination of pregnancy, MTP law, Second trimester termination of pregnancy, Self-medication, Unsafe abortions.

Journal of South Asian Federation of Obstetrics and Gynaecology (2023): 10.5005/jp-journals-10006-2226

INTRODUCTION

The World Health Organization defines medical abortion as “usage of pharmacological drugs to terminate pregnancy”. Early first trimester medical abortion is safe and effective method for the termination of pregnancy when performed under the standard guidelines. It has success rate of 95–99%.¹ Medical abortion is blessing only if performed under standard protocol and proper medical guidance. However, in India abortion pills are becoming a major public health problem due to ignorance of women, easy availability of medicine without medical prescription, and widespread misuse of these drugs by non-allopathic doctors, dais, and quacks.^{2,3} Estimates showed that around 45% of all abortions were unsafe. Almost all of these unsafe abortions took place in developing countries.⁴ Each year between 4.7 and 13.2% of maternal deaths can be attributed to unsafe abortion.⁵

According to annual health survey 2010–2013, Chhattisgarh has the highest rate of unsafe abortion (78.3%), hence it is essential to analyze level of complications after self-medication of abortion pills, their clinical presentation and outcome in the largest tertiary care of Chhattisgarh.

METHODS

It was hospital-based observational study conducted in the year between January 2020 and December 2020 in Pt. JNM Medical College and Dr. BRAMH, Raipur, among 125 cases who have self-administered abortifacient and attended the Department of OBGY. A detailed history was taken from each patient regarding their present complaints, associated symptoms, last menstrual

^{1–3}Department of Obstetrics and Gynaecology, Pt. JNM Medical College, Raipur, Chhattisgarh, India

Corresponding Author: Ritu Shilp Verma, Department of Obstetrics and Gynaecology, Pt. JNM Medical College, Raipur, Chhattisgarh, India, Phone: +91 8234053193, e-mail: ritubaghmar@gmail.com

How to cite this article: Thakur N, Verma RS, Nagaria T. Self-administration of Abortion Pills and its Maternal Outcome in Tertiary Care Center. *J South Asian Feder Obst Gynae* 2023;15(2):142–146.

Source of support: Nil

Conflict of interest: None

period (LMP), menstrual history of (H/o), obstetric H/o, and drug intake. On admission, urine pregnancy test (UPT), routine blood investigations like complete blood count (CBC), liver function test (LFT), renal function test (RFT), prothrombin time, and ultrasonography (USG) were sent.

Data were collected from all patients regarding their age, marital status, education, obstetric history, duration of intake of abortion pills and visit to hospital, chief complaint, and sign–symptoms on arrival at the hospital, investigations and USG at time of admission, treatment given, management of complications, need for blood/blood product transfusion, and duration of hospital stay. Analysis of data was done with help of appropriate statistical tool.

RESULT

In our study, majority of women (45 of 125; 36%) belong to age-group of 26–30 years, we account minimum age of 16 years and maximum age of 45 years. Majority of cases (115 of 125; 92%) were homemaker

Table 1: Demographic profile of patient in study population

Age-group (years)	No. of subjects (n = 125)	Percentage
<18	5	4
18–20	10	8
21–25	34	27.2
26–30	45	36
31–35	13	10.4
36–40	14	11.2
>40	4	3.2
Occupation	No. of subjects (n = 125)	Percentage
Homemaker	115	92.0
Private job	1	0.8
Student	9	7.2
Education	No. of subjects (n = 125)	Percentage
Illiterate	17	13.6
Primary	9	7.2
Secondary	12	9.6
Higher secondary	77	61.6
Graduate	4	3.2
Postgraduate	6	4.8
Total	125	100

Table 2: Gravidity of patient taking abortion pills

Gravida	No. of subjects (125)	Percentage
Primigravida	25	20
2	36	28.8
3	34	27.2
4	16	12.8
5	13	10.4
6	1	0.8
Total	125	100

and nearly half of the participants (77 of 125; 61.6%) were educated up to higher secondary. Around 74 of 125 (59.2%) cases belong to upper lower class according to Kuppuswamy's Classification (Table 1).

Hundred of 125 (80%) cases were multigravida and only 25 of 125 (20%) primigravida. There was only one patient presented with maximum gravidity, (i.e.,) 6 (Table 2).

In our study, 95.2% (119 of 125) cases procure their pills from pharmacist without any prescribe medications and few took from auxiliary nurse midwife (ANM), quack, friends as shown in Figure 1.

Majority of cases (115 of 125; 92%) reported to hospital with a complaint of bleeding per vaginam and many were having more than one chief complaint (Table 4).

In our study, 46.4% (58 of 125), i.e., majority of cases visit hospital with 1 week of self-administration of abortion pills, minimum day cases took to visit hospital was 1 day and maximum days cases took to visit hospital was 54 days (Table 3).

Sixty percent of patients took pills in the first trimester, out of which majority of cases (41 of 125; 32.8%) took pills in between 9 and 12 weeks. Minimum gestational age at which abortion pills were taken was 6 weeks, maximum gestational age at which abortion pills were taken was 28 weeks, and mean gestational age at which cases were taking abortion pills were 13+/-10.9 weeks (Table 5).

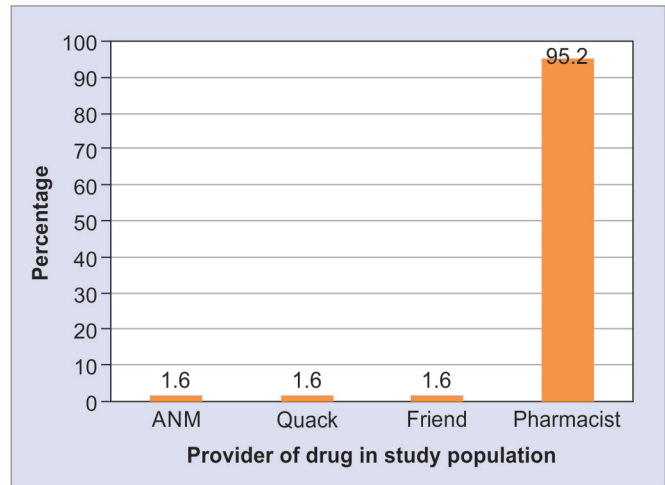


Fig. 1: Drug supplier

Table 3: Distribution according to patients presented to hospital after number of weeks from taking pill to hospital visit in study population

Weeks from taking pill to hospital visit	No. of subjects (n = 125)	Percentage
<1	58	46.4
1–4	33	26.4
4–8	12	9.6
8–12	14	11.2
>12	8	6.4
Total	125	100

Table 4: Chief complaint of patients presented to tertiary healthcare center with history of self-intake of abortion pills

Chief complaint	No. of subjects (n = 125)	Percentage
Pain in abdomen	27	21.6
Bleeding per vaginam	115	92
Passage of products of conception	13	10.4
Fainting	6	4.8
Generalized weakness	6	4.8

Table 5: Distribution according to gestational age at the time of abortion pills intake by subjects in study population

Gestational age at the time of intake (weeks)	No. of subjects (n = 125)	Percentage
<7	15	12
7–9	20	16
9–12	41	32.8
>12	49	39.2
Total	125	100

Amount of remnant product of conception (RPOC) vs intervention required by cases, it showed that more amount of RPOC increase risk of surgical intervention. As shown in Table 6, when RPOC was >15cc 89.6% case underwent surgical intervention.

The following Table 7 shows outcome after consumption of pills without prescription, where only 5.6% (7 of 125) cases attained

Table 6: Amount of RPOC vs intervention required by cases

	No intervention	Medical management	Surgical evacuation	Only blood transfusion
<10 cc RPOC, n = 52	2 (4%)*	35 (70%)	14 (26.9%)	1 (2%)
10–15 cc RPOC, n = 13	0	6 (46%)	5 (38.4%)	2 (15.3%)
>15 cc RPOC, n = 29	0	3 (10.3%)	26 (89.6%)	0
Total = 94	2 (2.1%)	44 (46.8%)	45 (47.8%)	3 (3.1%)

*Cases with very less RPOC, i.e., 2 cc and 3 cc

Table 7: Distribution according to outcome of subject in the study population

Outcome	No. of subjects (N = 125)	Percentage
Complete abortion	7	5.6
Failed abortion	18	14.4
Missed abortion	3	2.4
Incomplete abortion*	97	77.6
Total	125	100

*Three cases of rupture ectopic, uterine perforation, and uterine rupture are included in the incomplete abortion

Table 8: Outcome and management of patients after taking abortion pills

Outcome	No. of subjects	Percentage	Management
Incomplete abortion	82	65.6	Medical management—33 Blood transfusion—1 Medical management with blood transfusion—13 Evacuation—24 Evacuation with blood transfusion—11
Complete abortion	7	5.6	No intervention, only antibiotics given
Missed abortion	3	2.4	Suction evacuation—3
Failed abortion	18	14.4	No intervention—7 Tab misoprostol followed by evacuation—10 Tab misoprostol and blood transfusion—1
Incomplete abortion with sepsis	8	6.4	Medical management with blood transfusion—3 Evacuation—1 Evacuation with blood transfusion—4
Incomplete abortion with shock	7	5.6	Evacuation with blood transfusion—4 Exploratory laparotomy with blood transfusion—3

complete abortion, rest had failed, missed, or incomplete abortion (Tables 7 and 8).

DISCUSSION

In our country like India, awareness regarding abortion pills is dismal due to many reasons such as illiteracy, poverty, belief systems, desire to limit family size, and spacing pregnancy. Easy availability

of abortion pills leads to unguided rampant use of these pills which in return leads to various complications such as incomplete abortion, failed abortion, or abortion with sepsis or shock or with anemia.⁶ In India, 13 women die every day due to unsafe abortion. And 80% of women, according to research, are unaware of fact that abortion is legal in India and abortion services are provided in government hospitals.⁷

In our study, 125 women were evaluated for the maternal outcome associated with self-medication of abortion pills and observed that mean age of women presented to our hospital was 27.93+/-6.32 years. This may be due to the fact that this is the most fertile period of the reproductive age-group and early marriage, and unplanned child birth are prevailing in this part of the world.⁸ Majority of patients who took self-abortion pills were between 25 and 30 years of age (36%; 45 of 125), which is similar to Gupta et al.⁹ having 36% in the same age-group, while in Anjum et al.¹⁰ and Shankaraiah et al.¹¹ maximum cases were from the age-group of 20–25 years. This shows that younger women are frequently taking self-medication for abortion than older women, which may be due to lack of decision-making, unplanned pregnancy, incomplete awareness regarding contraception, and motivation by spouse and family members.

In our study, majority of women were homemakers (92%; 115 of 125) and their low strata in family hence society make them underconfident with low decision power for their own well-being. To our knowledge, our study was the first of its type which accounted for occupation of study participants.

In our study, only 12% (15 of 125) of study participants took the pills at correct gestational age, i.e., up to 7 weeks, and 26% (20 of 125) cases took abortion pills up to 9 weeks. The rest 72% (90 of 125) cases took abortion pills after 9 weeks, this highlights the fact that most women are not aware of importance of gestational age before taking pills, they are unaware of possible complications of abortion pills and take abortion pills irrespective of gestational age.²

In our study, we have observed that the maximum patients, i.e., 92% (115 of 125) presented with chief complaints of bleeding per vaginam, which is due to tablet misoprostol is PGE2 (prostaglandins) that causes uterine contraction and hamper blood supply of endometrium which causes endometrium of the uterus to shed in form of vaginal bleeding. Therefore bleeding is the commonest chief complaints which start after 2–24 hours of consumption of misoprostol tablets. Next commonest complaint was pain in abdomen in 21.6% (27 of 125) which occurs due to effect of misoprostol which causes uterine cramps. Approximately, 4.8% (6 of 125) of patients presented with dizziness and weakness because of prolonged bleeding which has led to anemia. There was one patient With bleeding on and off for 3 months after consumption of abortion pills, found to have 10 cc RPOC which was medically treated and blood transfusion done as patient was severely anemic. This reflects the fact that most of the women are unaware of complications of drug and they consume tablets



without knowing their actions and side effects. Similar report was demonstrated in the past studies^{7,9,10}

We have performed USG of all 125 cases reported to us after self-abortion pill intake. We have observed, in our study, 14.4% (18 of 125) of patients came with single life intrauterine fetus (SLIUF) which is evidence of drug failure, the failure rate of any medical abortion on ongoing pregnancy should be less than 1%^{3,12} when taken before 7 weeks and by correct regimen. Unsupervised abortifacient pill intake in irregular manner without any idea of complications in young women also contributes to the drug failure among the study participants. Majority (75.2%; 94 of 125) of patients had retained product of conception found in USG and only 5.6% (7/125) had no RPOC, means complete abortion, there is vast difference seen here that only few patients had desired result, rest all had incomplete abortion, missed abortion, uterine rupture, and perforation and ruptured ectopic. Same results were found in study of S Sarojini et al.¹³ (2015) where out of 104 cases 91% had RPOC and 8% have fatal complications like ruptured uterus, ruptured ectopic and septic peritonitis.

In our study, more than half of the cases (78.8%; 98 of 125) were found to had incomplete abortion and only 5.6% (7 of 125) had complete abortion. This shows the vast difference between complete and incomplete abortions, also 2.4% (3 of 125) missed abortions indicate unsupervised, incorrect schedule of drug intake. We did not encounter any mortality, but morbidity in the form of severe anemia (16.8%; 21 of 125), shock 5.6% (7 of 125) needed blood transfusion, higher antibiotics, ICU admission, sepsis in 6.4% (8 of 125), i.e., approximately one-fourth of cases landed up into lethal complications which may prove to be hazardous and increasing the burden over the society. This incomplete abortion is seen in other studies as well, 62.5% in Nivedita et al. (2013),¹⁴ 70.2% in Thaker et al.,¹⁵ and 78.8% in the present study. We had managed one case of ruptured ectopic presented with hemorrhagic shock, she required resuscitative measures, four units of blood transfusion was done. The risk of rupture of scar after previous section is 0.28% in the second trimester abortion and unlikely in the first trimester abortion.¹⁶ We also had one case of ruptured uterus, who was with two previous scars and took abortifacient unsupervised, she presented in shock with excessive bleeding per vaginam. Yet another woman presented in shock with Hb 4 gm% with hemoperitoneum had history of unprescribed abortifacient intake followed by dilatation and curettage 10 days back, she then came to hospital severely anemic with tenderness all over the abdomen, her USG showed hemoperitoneum and intraop finding was uterine perforation at fundus. This shows unsupervised, unprescribed use of abortifacient proves fatal.

Overall, there will be less than 1% chance of patient to have sepsis after medical abortion.¹⁷ Studies show higher rate of sepsis after self-administration of abortion pills, because of not maintaining proper hygiene by patient while taking self-abortion pill, few subjects took medicine pervaginally without maintaining hygiene, few were not changing pads frequently and many were bleeding per vaginam for longer duration and blood is good culture media for bacterial growth, all these things lead to septic abortion.¹⁸ Which is 7.4% in Nivedita et al. (2015),¹⁴ 4% in Jethani et al.¹⁹ (2015), 6.4% (8 of 125) in our study. These patients came out to be positive for gram-negative bacteria and generally require broad spectrum higher antibiotics and evacuation for complete recovery. Such complications also have adverse effect on future pregnancies.

In comparison with surgical evacuation or medical management which is better, different studies had surgical evacuation more than medical management, like in a study by Nivedita et al. (2013)¹⁴ surgical evacuation was 80% and medical management was 17.5% and in Gupta et al.⁹ surgical evacuation was 69% and medical management was 23%, whereas in our study 37.6% (47 of 125) patients undergone suction and evacuation and 48.8% (61 of 125) patients were treated medically, this depends solely upon treating doctor and best suitable management method for patient in given condition. Success rate of both is equivalent, as recorded in a study by Moodliar et al.,²⁰ they conducted randomized trial on 94 patients and found that success rate of medical abortion is 91.5% and surgical is 100% and there were no difference in satisfaction score. Thirteen percent of all maternal deaths are due to abortion every year. Therefore, safe and legal abortion practices are very important for our country to reduce morbidity and mortality.²¹⁻²³

CONCLUSION

Abortion pills should be banned as over-the-counter drug, strict surveillance is required for the same.

It should reach to public only through approved medical termination of pregnancy (MTP) centers after prescription.

Society need to be educated for risk of self-intake of abortion pills and their dangerous consequences. Medical termination of pregnancy should be done under strict vigilance.

ORCID

Ritu Shilp Verma  <https://orcid.org/0000-0001-9771-5560>

REFERENCES

1. Bearak J, Popinchalk A, Ganatra B, et al. Unintended pregnancy and abortion by income, region, and the legal status of abortion: Estimates from a comprehensive model for 1990–2019. *Lancet Glob Health* 2020;8(9):e1152–e1161. DOI: 10.1016/S2214-109X2030315-6.
2. Mentula MJ, Niinimäki M, Suhonen S, et al. Immediate adverse events after second trimester medical termination of pregnancy: Results of a nationwide registry study. *Human Reprod* 2011;26(4):927–932. DOI: 10.1093/humrep/der016.
3. Kahabuka C, Pembe A, Meglioli A. Provision of harm-reduction services to limit unsafe abortion in Tanzania. *Int J Gynaecol Obstet* 2017;136(2):210–214.
4. Ochoa MT, Espinoza H, Blandon MM. Exploring abortion stigma among women and their abortion providers in clandestine conditions. *Int J Gynecol Obstet* 2018;143:831–832.
5. Srivastava M, Srivastava A, Namrata K. Abortion pills as over-the-counter drugs – A boon or a curse. *J Evol Med Dent Sci* 2018;77:820–823. DOI:10.14260/JEMDS/2018/187.
6. Kumari DL, Indhumathi D. Study of outcome of cases of self-medication with mifepristone with or without misoprostol for medical abortion. *Inter J Clin Obstet Gynaecol* 2020;4(6):236–241. DOI: 10.33545/gynae.2020.v4.i6d.760.
7. Bhalla S, Goyal LD, Bhalla S, et al. Self administered medical abortion pills: Evaluation of the clinical outcome and complications among women presenting with unsupervised pill intake to a tertiary care hospital in Malwa region of Punjab, India. *Int J Reprod Contracept Obstet Gynecol* 20187(4):1537. DOI: 10.18203/2320-1770.ijrcog20181351.
8. Sensoy N, Dogan N, Sen K, et al. Unwanted pregnancy and traditional self-induced abortion methods known among women aged 15 to 49. *JPMA J Pakis Med Assoc* 2015;65(5):452–456.

9. Gupta M, Pandey D, Salhan S. Analysis of self-prescribed abortion pill: An eye opener. *Ind J Obstet Gynecol Res* 2021;6(2):144–149. DOI: 10.18231/j.ijogr.2019.034.
10. Anjum D, Mehta S, Grover A, et al. Self-medication for abortion: safety issues. *J Obstet Gynecol Ind* 2017;67(5):382–383. DOI: 10.1007/s13224-017-1005-4.
11. Shankaraiah R, Annadani R, Vijayashankar V, et al. Medical termination of pregnancy and subsequent adoption of contraception. *Inter J Reprod Contracept Obstetr Gynecol* 2013;367–371. DOI: 10.5455/2320-1770.ijrcog20130921.
12. Meglioli A, Kahabuka C. Key lessons from implementation of the harm reduction services for unwanted pregnancies in Tanzania: potential for elimination of maternal deaths from unsafe abortion. *Int J Gynecol Obstet* 2015;131. E305.
13. Sarojini, Ashakiran TR, Bhanu BT, et al. Over-the-counter MTP Pills and Its Impact on Women's Health. *J Obstet Gynecol India* 2017;67:pp. 37–41. <https://doi.org/10.1007/s13224-016-0916-9>.
14. Nivedita K, Shanthini F. Is it safe to provide abortion pills over the counter? A study on outcome following self-medication with abortion pills. *J Clin Diag Res: JCDR*. 2015;9(1):QC01.
15. Thaker RV, Deliwala KJ, Shah PT. Self Medication of Abortion Pill: Women's Health in Jeopardy. *NHL Journal of Medical Sciences*. 2014;3(1). Corpus ID: 78349653.
16. Rosing MA, Archbald CD. The knowledge, acceptability, and use of misoprostol for self-induced medical abortion in an urban US population. *J Am Med Women Assoc* 2000;55(Suppl. 3):183–185.
17. Banerjee SK, Andersen K. Exploring the pathways of unsafe abortion in Madhya Pradesh, India. *Glob Public Health* 2012;78:882–896. DOI: 10.1080/17441692.2012.702777.
18. Gipson JD, Hirz AE, Avila JL. Perceptions and practices of illegal abortion among urban young adults in the Philippines: A qualitative study. *Stud Fam Plan* 2011;42(4):261–272. DOI: 10.1111/j.1728-4465.2011.00289.x.
19. Jethani M, Yadav K, Muchhoria S, Sharma S. Monika. Self Medicated Abortion – Care or Crime *JMSCR*. 2015;3(09):7507–7512. DOI: <http://dx.doi.org/10.18535/jmscr/v3i9.33>.
20. Moodliar S, Bagratee JS, Moodley J. Medical vs. surgical evacuation of firsttrimester spontaneous abortion. *Int J Gynaecol Obstet* 2005;91(1):21–26. DOI: 10.1016/j.ijgo.2005.06.009.
21. Kapp N, Grossman D, Jackson E, et al. A research agenda for moving early medical pregnancy termination over the counter. *BJOG* 2017;124(11):1646–1652. DOI: 10.1111/1471-0528.14646.
22. Upadhyay UD, Biggs MA, Foster DG. The effect of abortion on having and achieving aspirational one-year plans. *BMC Womens Health* 2015;15(1):102. DOI: 10.1186/s12905-015-0259-1.
23. Say L, Chou D, Gemmill A, Tunçalp O, Moller AB, others. 2014. "Global Causes of Maternal Death: A WHO Systematic Analysis." *The Lancet Global Health*;2(6):e323-333. DOI: 10.1016/S2214-109X(14)70227-X.