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Original Research Article

Outcomes after unsupervised self-administration of abortion pills presenting at a tertiary care hospital in Eastern India

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ABSTRACT

Background: Medical abortion is safe and effective when used according to standard guidelines. However, unsupervised self-administration may result in resource wastage and maternal morbidity. This study assessed outcomes and complications associated with unsupervised abortion pill intake in a tertiary care hospital in Eastern India.

Methods: A retrospective cross-sectional study was conducted at Calcutta National Medical College and Hospital from January to December 2025 after institutional ethical approval. Women presenting after abortion pill intake without supervision of a registered medical practitioner were included. Women with spontaneous abortion or medically supervised termination were excluded. Detailed data regarding Sociodemographic characteristics, clinical presentation, complications etc were collected from hospital records and analysed using standard statistical methods and recorded.

Results: Among 152 women, 38.8% were aged 26–30 years and 57.2% were from rural areas. Unintended pregnancy was the commonest reason for abortion (63.9%), while influence of friends or relatives (30.9%) was the leading reason for avoiding medical consultation. Vaginal bleeding was the commonest presenting complaint (64.5%). Incorrect dosage occurred in 59.8% and 38.2% took pills beyond 9 weeks of gestation. Surgical intervention was required in 54.6%, including laparotomy for ectopic pregnancy in two cases. ICU admission was required in 17.7%. No maternal death occurred. Incorrect dosage (aOR 2.57, 95% CI 1.25–5.27), gestational age >9 weeks (aOR 3.84, 95% CI 1.79–8.26) and increasing age were significantly associated with complications.

Conclusions: Unsupervised self-administration of abortion pills were associated with substantial maternal morbidity. Appropriate counselling, adherence to recommended regimens and access to supervised abortion services are essential to reduce preventable complications.

Keywords: Unsupervised, Self-administration, Abortion pill

INTRODUCTION

Medical abortion is defined as “Usage of pharmacological drugs to terminate pregnancy” (WHO). Early first-trimester medical abortion, when provided under standard clinical protocols, is a safe and highly effective method of pregnancy termination, with success rates ranging from 95% to 99%.¹ According to the Ministry of Health and Family Welfare (MoHFW), Government of India, medical abortion is recommended for termination of intrauterine pregnancy up to 9 weeks of gestation by using mifepristone and misoprostol. It should be prescribed by a registered medical practitioner and appropriate follow-up

has to be ensured.² The recommended regimen for medical abortion up to 9 weeks of gestation is 200 mg mifepristone orally followed 24–48 hours later by 800 mcg of misoprostol administered buccally, sublingually or vaginally.³ However, in recent years the number of unintended pregnancies is increasing in India. Analysis of NFHS-5 data, comprising 219,173 recorded pregnancies across India, shows that approximately 9.1% were reported as unintended which reflects a large burden of unplanned conception in the country.⁴ Those unintended pregnancies often result in self-induced termination specially by medical methods in the form of over-the-counter drugs, many of which are undertaken without

appropriate medical supervision of certified practitioners, without proper monitoring or adherence to standard guidelines. These self-induced abortions are becoming serious public health concern. Patients often visit hospitals in a severely critical condition after losing large volumes of blood resulting in longer hospital stays, blood and blood products transfusion, ICU admissions, interventions in forms of emergency operations etc. resulting in morbidity, mortality and considerable health care resource wastage. This major public resource wastage is mainly due to careless behaviour of the patients, poor follow up, over the counter availability of medicines, non-scientific use of these drugs by uncertified non allopath practitioners, local dais and quacks.^{5,6}

In this context, evaluation of the clinical outcomes and resource implications of unsupervised abortion pill use is essential. This study aims to analyse the presentations, complications and healthcare burdens associated with unsupervised medical abortion in a tertiary care hospital in Eastern India.

METHODS

This study is a hospital based retrospective cross-sectional study which was conducted after obtaining ethical clearance from the institutional ethical committee. All the women who attended OPD and emergency of Calcutta National Medical College and Hospital with history of abortion pill intake without supervision of a registered medical practitioner between January 2025 to December 2025 were included in the study.

Women who had spontaneous abortions and who were prescribed abortifacients in accordance with MTP law were excluded. Data regarding 152 such women who satisfied the inclusion and exclusion criteria were collected from labour room registers, OT registers, admission discharge registers, ICU registers etc of the department of obstetrics and gynaecology. Detailed history was noted including age, marital status, parity, duration of pregnancy (from LMP), history regarding previous pregnancies, reason for abortion, reason for self-administration, duration between pill intake and visit to hospital etc. Investigations, interventions and complications encountered were meticulously tabulated, complications following unsupervised abortion pill intake recorded in the study included incomplete abortion requiring surgical intervention, sepsis, shock, ectopic pregnancy requiring laparotomy, renal failure requiring dialysis, continuation of pregnancy etc.

Management was based on primary assessment of the patients clinically, biochemically and by Ultrasound analysis. Management plans like initial resuscitation, surgical evacuation, Laparotomy, blood transfusion, ICU support, medical management etc. were done in accordance with patient conditions and initial diagnosis. Collected data were analysed using SPSS version 21.0 and

Jamovi version 2.3.28. Descriptive statistics were used to summarise the data as frequencies and percentages.

Associations between categorical variables were assessed using appropriate statistical tests. Binary logistic regression analysis was performed to identify factors associated with the occurrence of complications. Variables including age, gravida, correct dosage of abortion pills, gestational age at pill intake and delay in seeking care were included in the model. Results are presented as adjusted odds ratios (aORs) with 95% confidence intervals (CIs) and a p value of <0.05 was considered statistically significant.

RESULTS

Total 152 women who gave history of abortifacient intake without any medical consultation were included in the study.

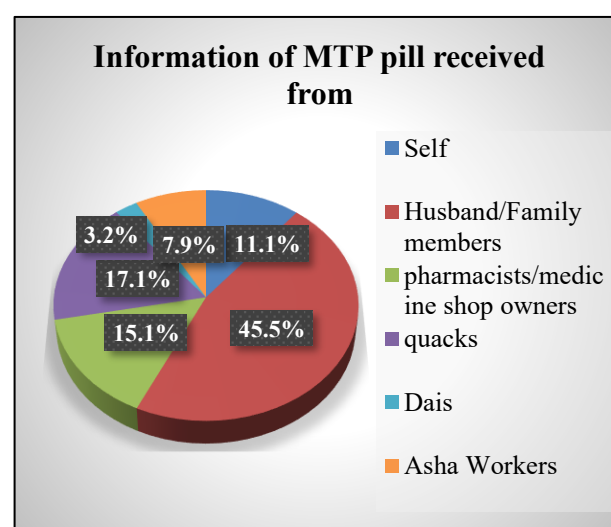


Figure 1: Source of information of MTP pills.

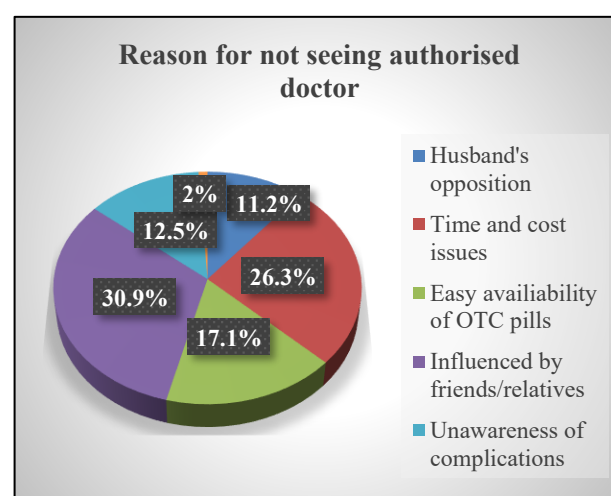


Figure 2: Showing reasons for not seeing authorised doctor.

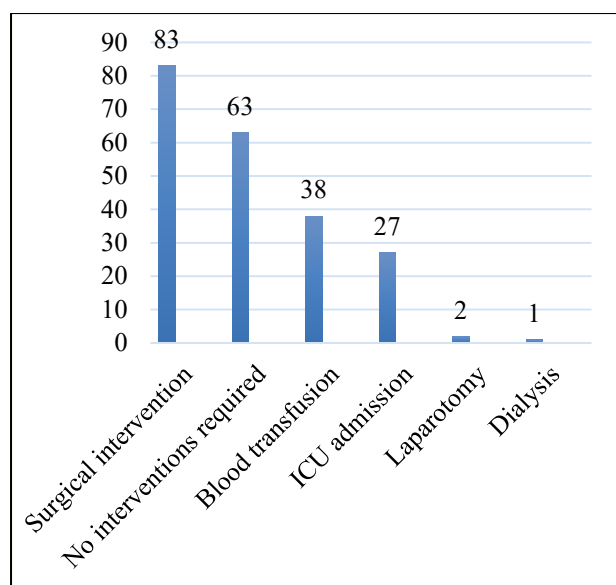


Figure 3: Interventions done after admission.

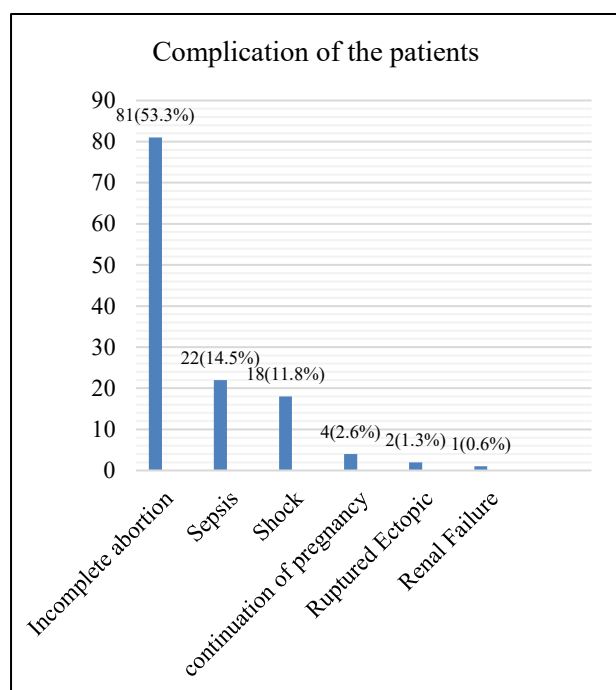


Figure 4: Complications of the patients.

In the present study the largest proportion belonged to 26-30 years age group (38.8%). The youngest patient was 16

years old, oldest was 43 years old, most of the participants were married (149/152, 98.0%). 57.2% of them were residents of rural area. Most of the study population were having secondary education (55.3%) and were housewives (63.2%) by occupation. Most of the women were gravida 2 and 3 (71.7% combined) and 1 patient was 5th Gravida.

38.2% women had taken pills after 9 weeks of gestation (WHO recommendation is up to 9 weeks). Unintended pregnancy was the most common (63.9%) reason cited for induction of abortion. On asking about the reason for not seeing an authorised doctor, influence by friends and relatives (30.9%) followed by time and cost issues (26.3%) were the two most common reasons stated. Majority of them (45.5%) got the information of abortion pills from husband/relatives.

Most of the patients (64.5%) came with complaints of bleeding pv and majority of them (85 out of 152) came to visit hospital after 1 week of the pill intake. 83 patients needed surgical intervention, 2 of them underwent laparotomy due to ectopic pregnancy. 27 patients (17.7 %) needed ICU admission, 22 of them were in Shock. 18 patients developed sepsis whereas 38 patients required blood and blood products transfusion. 1 patient required dialysis due to renal failure and 4 patients complained of continuation of the pregnancy. There was no maternal death. 91 of 152 women (59.8%) did not take the correct dosage of abortion pills. On binary logistic regression analysis, incorrect dosage was independently associated with higher odds of complications (aOR 2.57, 95% CI 1.25–5.27; $p=0.010$). Pill intake at a gestational age of more than 9 weeks was also associated with higher odds of complications (aOR 3.84, 95% CI 1.79–8.26; $p<0.001$). Increasing age was significantly associated with complications (aOR 1.11, 95% CI 1.01–1.23; $p=0.039$). Gravida and delay in seeking care were not significantly associated with complications.

Adjusted odds ratios were obtained from binary logistic regression analysis with complications as the outcome variable. For categorical variables, the category without an adjusted odds ratio is the reference category. Age was entered as a continuous variable and the adjusted odds ratio represents the change in odds of complications for each one-year increase in age. Similarly, the adjusted odds ratio for gravida represents the change in odds of complications for each one-unit increase in gravida (OR=odds ratio; CI=confidence interval).

Table 1: Sociodemographic characteristics of women presenting after unsupervised abortion pill intake.

Characteristic	Age category	Number (n=152)
Age (in years)	<18	5 (3.3%)
	18-25	41 (27%)
	26-30	59 (38.8%)
	31-35	35 (23%)
	>35	12 (7.9%)
Gravida	1	27 (17.8%)

Continued.

Characteristic	Age category	Number (n=152)
	2	56 (36.8%)
	3	53 (34.9%)
	4	15 (9.9%)
	5	1 (0.7%)
Residence	Rural	87 (57.2%)
	Urban	65 (42.8%)
Marital status	Married	149 (98%)
	Unmarried	3 (2%)
Education	Illiterate	2 (1.3%)
	Primary	7 (4.6%)
	Secondary	84 (55.3%)
	Higher secondary	53 (34.9%)
	Graduate	6 (3.9%)
Occupation	Housewife	96 (63.2%)
	Self employed	17 (11.2%)
	Private / Govt Employee	13 (8.5%)
	Student	26 (17.1%)

Table 2: Gestational age at unsupervised pill intake.

Gestational age	Number	%
<7 weeks	28	18.4
7-8 weeks 6 days	66	43.4
9-11 weeks 6 days	51	33.6
>= 12 weeks	7	4.6

Table 3: Chief complaints at presentation.

Chief complaint at presentation	Number (n =152)	%
Bleeding PV	98	64.48
Passage of products of conception	17	11.18
Pain Abdomen	31	20.39
Fever	22	14.47
fainting	4	2.63
Fowl smelling vaginal discharge	2	1.32
Continued pregnancy	4	2.63

Table 4: Reasons cited for abortion.

Reason for abortion	Number (n=152)	%
Unintended conception	97	63.9
Short interval from previous pregnancy	18	11.8
Monetary issues	16	10.5
Family issues	21	13.8

Table 5: Delay between seeking care and abortion pill intake.

Delay in weeks after abortion pills intake	Number (n=152)	%
<1 weeks	67	44.1
1-1 week 6 days	48	31.6
2-2 weeks 6 days	18	11.8
3-3 weeks 6 days	15	9.9
>= 4 weeks	4	2.6

Table 6: Association of maternal and clinical characteristics with complications following unsupervised abortion pill intake.

Maternal and clinical characteristics		Complications		Adjusted OR	95% CI	P value
		None n (%)	Yes n (%)			
Dosage of abortion pills taken	Incorrect dose	31 (34.1)	60 (65.9)	2.57	(1.25-5.27)	0.010
	Correct dose	35 (57.4)	26 (42.6)			
Gestational age of pill intake	≤9 weeks	51 (54.3)	43 (45.7)	3.84	(1.79–8.26)	<0.001
	>9 weeks	15 (25.9)	43 (74.1)			
Delay in seeking care after pill intake	≤1 week	30 (44.8)	37 (55.2)	1.14	(0.56–2.34)	0.718
	>1 week	36 (42.4)	49 (57.6)			
Age (per one year increase)				1.11	(1.01–1.23)	0.039
Gravida (per unit increase)				0.91	(0.49-1.66)	0.747

DISCUSSION

The introduction and over the counter availability of the abortion pills were intended to reduce the surgical complications of unplanned pregnancies. But un-scientific use of the Abortion pills, non-adherence to the dosage schedules and prescription by non-allopath, non-registered practitioners have turned it into a cause of public health hazard.

The present study was conducted to find out the implications of self-administration of abortion pills by pregnant women at a tertiary care hospital in eastern India. Authors found that the mean age of women seeking abortion was 28.2 years, which was similar to the studies done in Gujrat (26 years in study done by Dodiya et al).⁷ In the present study, most common age group was found to be 26-35 years, similar result was found by studies done in Dehradun by Singh et al.⁸ More than 2/3rd of the patients (81.6%) had history of pill intake at more than 7 weeks of gestation, similar results (74%) were noted in studies done by Bhalla et al, at a tertiary care hospital in Punjab.⁹ More than half of the women (54.6%) who had self-administration of abortion pills were primigravida or 2nd gravida which was more than the findings of most of the studies like Mishra et al (22%), Giri et al (17%), Thaker et al (10.9%) and Kumari et al (13.33%).¹⁰⁻¹³ This implies that in the present study more women are opting for abortion pills in their 1st and 2nd pregnancies which may be due to less spacing between 1st and 2nd pregnancies, contraceptive unawareness, younger age of 1st pregnancy, early marriage etc.

The most common reason cited for not seeing to any authorised doctor in our study was ‘influence of family members’ (30.9%) followed by ‘time and cost issues’ (26.3%). Study conducted in Punjab shows otherwise, ‘easy over the counter pill availability’ was the major reason for not showing authorised doctor in that study.⁹ In the present study nearly 2/3rd of the patients (64.48%) presented with vaginal bleeding, this finding collaborates to other studies by Agarwal et al, Nivedita et al, Jethani et

al, where 56%, 62.5% and 57.45% patients presented with bleeding PV respectively.¹⁴⁻¹⁶ Majority of the patients (59.8%) did not take correct recommended dose of MTP. Almost half of the patients (53.3%) required surgical evacuation due to incomplete abortion. This is similar to studies by Kumari et al and by Mishra et al where surgical evacuation was required in 50% and 46.5% of the cases respectively.^{10,13} Whereas in study of Sarojini et al it was found that out of total 104 cases, 91% had RPOC and 8% have fatal complications like ruptured uterus, ruptured ectopic and septic peritonitis.¹⁷ No mortality was observed in the present study; however, a considerable proportion of patients developed significant morbidity. Severe anemia was noted in 38 out of 152 cases and required blood transfusion. Additionally, 11.8% of patients presented with shock, while 14.5% developed sepsis necessitating ICU admission and administration of higher-spectrum antibiotics. Two cases of ruptured ectopic pregnancy required urgent resuscitative management and one patient developed renal failure requiring dialysis. Overall, nearly half of the cases were associated with serious, potentially life-threatening complications, thereby contributing to an increased burden on the healthcare system and society. Sepsis and shock were defined as per SIRS criteria and SOFA score in the present study and 14.5% patients in the present study had sepsis. Studies suggest if all protocols are followed there are only 1 % chance of sepsis after medical abortion.¹⁸ Studies show higher rate of sepsis after self-administration of abortion pills, because of not maintaining proper hygiene during intake of abortifacient specially during per vaginal application, similar results were noted in studies done by Nivedita et al, (7.4%) and Nagaria T et al, (6.4%).^{15,19}

Age, gestational age of pill intake and incorrect dose of pill usage has statistically significant relation with complications of abortion.

Limitations

This study is a single hospital-based study which may not reflect the actual disease burden in the society. Therefore,

larger studies need to be done to assess the actual magnitude of the problem in the society.

CONCLUSION

The over-the-counter availability of the medical abortion pills and its unscientific use is resulting in significant health hazard and resource wastage in the community. Medical abortion should be strictly under supervision of trained professionals properly maintaining the national and international guidelines. Public awareness needs to be spread regarding the hazards of the unscientific use of these drugs. Distribution and use of medical abortion pills among the general population should be limited to healthcare centres authorized to provide MTP services under strict vigilance.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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