

Prevalence of Anaemia in Women with Unsupervised Medical Abortion- An Observational Study

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ABSTRACT

Introduction: According to American College of Obstetricians and Gynaecologists (ACOG) and other organisations such as the Society of Family Planning (SFP) and American Society for Reproductive Medicine (ASRM), abortion services are considered as an essential component of comprehensive healthcare. Such services are considered as a time-sensitive issue, as delay in getting comprehensive abortion services may be associated with significant impact on physical health, wellbeing and mental health of the individual.

Aim: To determine proportion of women presenting to Gynaecology Outpatient Department (OPD) with unsupervised use of abortion pills and to estimate the percentage of anaemia among these women.

Materials and Methods: The present observational study was conducted on 148 women attending the Gynaecology OPD in People's Hospital, Bhopal, Madhya Pradesh, India and seeking treatment for complications due to unsupervised use of abortion pills during the study period of 18 months. A thorough history was obtained and a thorough physical examination was conducted. Haemoglobin estimation and Ultrasonography (USG) was done to determine complications. Data was compiled using Microsoft excel and results were expressed in terms of frequency and percentages and mean±SD.

Results: During the study period, a total of 360 cases with abortions were registered, of them 150 cases were unsupervised attributing to 41.7% cases. Out of 150 females with unsupervised abortions, 2 females did not give consent to participate and thus a total of 148 females were enrolled. Consumption of unsupervised abortion pills resulted in incomplete abortion in 77 (52%) cases, while complete abortion was reported in only 22 (14.9%) cases. Other complications observed in a few cases were septic shock, in 7 (4.7%) haemorrhagic shock in 4 (2.7%), secondary infertility in 3 (2%), inevitable abortion in 3 (2%), ruptured ectopic pregnancy in 3 (2%) and chronic ovarian ectopic in 1 (0.7%). Missed abortion was documented in 20 (13.5%) cases after complete examination and in 8 (5.4%) cases viable intrauterine pregnancy was diagnosed. Mild, moderate and severe anaemia was observed in 19 (12.8%), 98 (66.2%) and 12 (8.1%) females, respectively.

Conclusion: The unsupervised use of abortion pills not only increases maternal morbidity but also has been associated with life threatening complications such as septic shock, haemorrhagic shock, ruptured ectopic pregnancy etc. Anaemia is one of the most common complication of unsupervised pill consumption and preventing the latter may obviate the need for blood transfusion.

Keywords: Complications, Diagnosis, Period of gestation

INTRODUCTION

According to World Health Organisation (WHO), an abortion is defined as unsafe abortion when an unwanted pregnancy is terminated by various procedures/methods either by unskilled person or in an unsafe environment (lacking the minimal medical standards), or both [1]. The rate of unsafe abortions and associated mortalities are reported to be much higher in developing countries when compared to developed nations [2]. However, the exact proportions of induced abortions are often underestimated due to rampant practice of self-administration of unsupervised abortion pills [3]. Though, medical abortion when practiced with strict adherence to Medical Termination of Pregnancy (MTP) guidelines is a safe method for termination of pregnancy, with approximate success rate of 95-99% [4]. According to MTP Act (2020- latest amendment), medical termination of pregnancy can be done upto 20 weeks of gestation by a certified registered medical practitioner at the designated facilities [5].

Misoprostol and mifepristone are approved by Drug Controller General of India as medical methods of termination of pregnancy. Central Drugs Standard Control Organisation, Directorate General Of Health Services (DGHS) approved a combi-pack of Mifepristone (1 tab 200 mg) and Misoprostol (4 tabs 200 mcg each) and this can be given for termination of pregnancy upto 63 days of gestation [6]. Medical termination of pregnancy act law enforces strict confidentiality of pregnant females undergoing medical termination

of pregnancy. Despite the confidentiality, majority of the beneficiaries opt for unsafe mode of abortion by using unsupervised drugs due to easy availability of over the counter drugs or seek treatment from the quacks [5].

India faces a huge unmet need of contraception. Though, the contraceptives are available even at primary centres, their use is suboptimal, however, abortion pills are being used as an alternative to contraceptive methods. These unsupervised and over the counter use of abortion pills results in life threatening complications and is associated with high morbidity as well as mortality [7]. One of the disadvantage associated with medical abortion is incomplete abortion, which is reported in 0.2-3% of cases [8,9]. Incomplete abortion is associated with excessive bleeding per vaginum and cause anaemia of varying severity which may be life threatening [10]. According to ACOG and other organisations such as the Society of Family Planning (SFP) and American Society for Reproductive Medicine (ASRM), abortion services are considered as an essential component of comprehensive healthcare. Such services are considered as a time-sensitive issue, as delay in getting comprehensive abortion services may be associated with significant impact on physical health, wellbeing and mental health of the individual. It has been recommended to collaborate community-based and hospital-based clinicians so as to ensure timely access to abortion care services especially during the Coronavirus Disease (COVID) time [11]. Given the higher proportion of cases taking

unsupervised abortion pills and associated increase in maternal and foetal complications, this study was carried out to determine proportion of women presenting to Gynaecology OPD with unsupervised use of abortion pills and to estimate the percentage of various complications particularly anaemia among these women.

MATERIALS AND METHODS

This study was conducted as an observational study on women attending the Gynaecology OPD in People's College of Medical Science and Research Centre, Bhopal, Madhya Pradesh, India and seeking treatment for complications due to unsupervised use of abortion pills during the study period from 1st November 2019 to 30th April 2021. After obtaining ethical clearance from Institutes Ethical Committee [PCMS/OD/2019/1439(18)], all the females fulfilling inclusion criteria were enrolled and written consent was obtained from all of them.

During the study period, a total of 360 cases with abortions were registered, of them 150 cases were unsupervised attributing to 41.7% cases. Out of 150 females with unsupervised abortions, 2 females did not give consent to participate and thus a total of 148 females were enrolled.

Inclusion criteria: Women with history of consumption of abortion pills without any medical supervision, upto 20 weeks of pregnancy and presenting with complications were included.

Exclusion criteria: Females with unknown Urine Pregnancy Test (UPT) status, receiving abortion pills under supervision and unsupervised pills consumed after 20 weeks of pregnancy were excluded.

Unsupervised consumption of abortion pill refers to women taking over the counter pills without prescription from registered medical practitioner or Gynaecologist or taking prescription from traditional healers or quacks.

Study Procedure

A thorough sociodemographic variables (age, education), gravida status, mode of presentation was obtained from all the females using a proforma. Their obstetric history period of gestation, method of abortion, duration between consumption of abortion pill and seeking care etc. was obtained. These participants were then subjected to thorough physical examination. All the females were subjected to routine blood investigations and ultrasonography for Retained Product of Conception (RPOC). Based upon the findings of examination, the participants were categorised as incomplete, inevitable, missed, septic abortion, complete abortion and ectopic pregnancy. Haemoglobin estimation was done in all the cases and severity of anaemia was classified according to World Health Organisation (WHO) classification [12]. Appropriate management was carried out in each case for example suction and evacuation in each case, laparotomy in case of ectopic pregnancy.

STATISTICAL ANALYSIS

Data was compiled using Microsoft (MS) excel and analysed using International Business Management (IBM) Statistical Package for Social Sciences (SPSS) software version 20.0. Categorical data was expressed as frequency and proportion whereas continuous data was expressed as mean and standard deviation.

RESULTS

Mean age of women who underwent unsupervised abortions was 27.14 ± 4.29 years. Majority of females were third gravida 51 (34.5%). Only 61 (41.2%) women achieved atleast primary level of education whereas about 22 (14.9%) females were illiterate [Table/Fig-1].

On ultrasonography, consumption of unsupervised abortion pills resulted in incomplete abortion in 77 (52%) cases, while complete abortion was reported in only 22 (14.9%) cases [Table/Fig-2].

Mean haemoglobin levels in females following consumption of unsupervised abortion pills was 9.15 ± 1.41 gm/dL, majority of

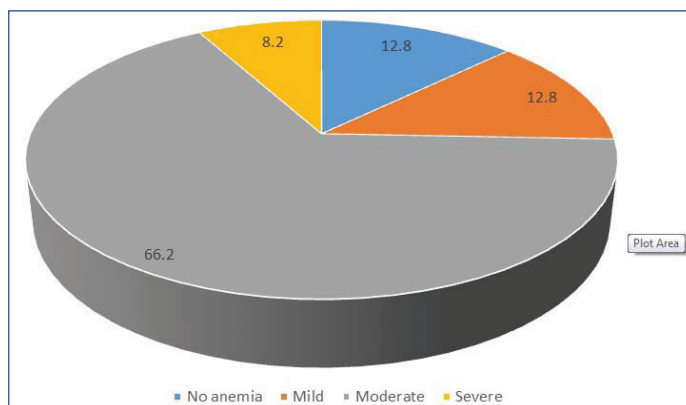
Parameters	Frequency (n=148)	
Age (years)	≤20	5 (3.4%)
	21-30	113 (76.4%)
	>30	30 (20.3%)
Gravida	1	20 (13.5%)
	2	43 (29.1%)
	3	51 (34.5%)
	≥4	34 (23.0%)
Education	Illiterate	22 (14.9%)
	Primary	61 (41.2%)
	Higher secondary	42 (28.3%)
	Graduate	23 (15.5%)
Mode of presentation	Irregular bleeding per vaginum	56 (37.8%)
	Excessive bleeding per vaginum	34 (22.9%)
	Abdominal pain on and off	45 (30.4%)
	Product of conception not passed	6 (4.1%)
	Giddiness and fainting	4 (2.7%)
	Recurrent abortion	2 (1.4%)
	Not able to conceive	1 (0.7%)
Period of gestation	4-6 weeks	44 (29.7%)
	7-12 weeks	101 (68.2%)
	≥12 weeks	3 (2.0%)
Time of presentation	Early (≤15 days)	43 (29.1%)
	Late (>15 days)	105 (70.9%)

[Table/Fig-1]: Distribution according to baseline variables.

Diagnosis	Frequency (n=148)
Incomplete abortion	77 (52%)
Complete abortion	22 (14.9%)
Failed abortion	20 (13.5%)
Live pregnancy	8 (5.4%)
Septic shock	7 (4.7%)
Haemorrhagic shock	4 (2.7%)
Secondary infertility	3 (2.0%)
Inevitable abortion	3 (2.0%)
Ruptured ectopic pregnancy	3 (2.0%)
Chronic ovarian ectopic	1 (0.7%)

[Table/Fig-2]: Distribution according to diagnosis.

females presented with anaemia (haemoglobin <11 gm/dL). Mild, moderate and severe anaemia could be observed in 19 (12.8%), 98 (66.2%) and 12 (8.2%) females, respectively while no anaemia was observed in 19 (12.8%) [Table/Fig-3]. Blood transfusion was



[Table/Fig-3]: Distribution according to haemoglobin levels.

required in nine patients in the present study due to severe anaemia and associated excessive bleeding.

Suction and Evacuation (S&E) was the most common method used for management of complicated cases. About 4 (2.7%) cases required laparotomy in view of ectopic pregnancy and 1(0.7%) case delivered a healthy neonate at term gestation [Table/Fig-4]. Overall, blood transfusion was required in 9 patients (8 with S&E and 1 with MTP).

Treatment	Frequency (n=148)	Percentage
Suction and Evacuation	100	67.6
Initial resuscitation f/b suction and evacuation	1	0.7
MTP	10	6.8
Antenatal care	4	2.7
Laparotomy	4	2.7
Supportive management	29	19.6

[Table/Fig-4]: Distribution according to management.

DISCUSSION

Though pregnancy and child birth are universally celebrated event, but the decision of entering into motherhood is a life changing experience. The unwanted pregnancy and methods of dealing with the unwanted pregnancy may have deleterious effect on health of not only mother but of the child as well. The MTP act was passed in 1971 in India to reduce the maternal morbidity and mortality due to unsafe and illegal abortion by preventing such abortions. The law enforces strict confidentiality, despite which, majority of the beneficiaries opt for unsafe mode of abortion by using unsupervised methods [11]. Easy and over the counter availability of abortion pills allow the female to consume the pill for not only abortion but also for other variety of reasons such as limiting family size, failure of contraception, birth spacing etc [13]. Thus, even after the decades of legalisation of abortions in India, the morbidity and mortality due to unsafe abortion remains high [14]. There is huge under-reporting of abortion due to associated social stigma. Literature suggest that majority of unwanted pregnancies are dealt outside the health facilities. Thus, the actual figure of unsafe and unsupervised abortions are often under-reported and only those with complications seek care at the health facility [3].

In the present study, the proportions of unsupervised abortions was 41.7%. The incidence of unsupervised abortions was 31.2% in a study of Nivedita K and Shanthini F, [3] Singh S et al., [15] and Yokoe R et al., [16] reported the proportions of unsupervised abortions as 73% and 67.1%, respectively. All these studies were conducted in India. Shamsi S et al., [17] reported much higher rate of unsupervised abortions in their study in Bangladesh. Overall, the percentage of unsupervised abortions have been documented to be higher in countries with restrictive abortion laws (approximately 75%) [18].

In the present study, majority of females presented after 15 days of consumption of abortion pills 71% whereas only 4.7% cases presented as early as during the first seven days of consumption. This study findings were supported by findings of Mishra N, in which, majority of females presented with irregular bleeding of more than two weeks following consumption of abortion pills [19]. In contrast, Nivedita K and Shanthini F, documented that maximum females presented within first five days of consumption of abortion pills [3]. Munshi KS et al., also observed that majority of women presented within 1-10 days after consumption of the pills [13].

Unsupervised consumption of abortion pill at any gestational age along with improper dosage may be associated with serious life threatening complications including ectopic pregnancy or haemorrhagic shock. In the present study, irregular bleeding per vagina was the most common symptoms at presentation observed in 37.8% cases. Similarly, excessive bleeding was the most common symptom following unsupervised pills in previous studies [3,12,13].

Based upon the presenting symptoms and examination, diagnosis of incomplete abortion was established in 52% cases. However, missed abortion and continuation of pregnancy was noted in 13.5% and 5.4% cases, respectively. The present study findings were supported by findings of Nivedita and Shanthini F, in which incomplete abortion was noted in 62.5% of the patients and failed abortion in 22.5% cases. About 7.5% females presented with incomplete abortion with sepsis [3]. Giri A et al., reported incomplete abortion in 60% cases and septic abortion and ectopic pregnancy in 6.5% cases each [10]. Pawde AA et al., reported incomplete abortion in 30% cases following medical method of abortion which was associated with self-administration or due to incorrect dosage and drugs [20]. Incomplete abortion was the most common diagnosis observed in 80% cases in a study by Munshi KS et al., [13]. This study documented anaemia in greater than 85% cases and majority had moderate anaemia 66.2%. Excessive bleeding may cause anaemia and anaemia further aggravate bleeding. Blood transfusion was required in 9 patients in the present study due to severe anaemia and associated excessive bleeding. Similar to present study, Nivedita K and Shanthini F, [3] and Giri A et al., [10] observed anaemia in 100% and 80%cases respectively, with mild to moderate anaemia in maximum cases. Gupta R et al., reported anaemia in 92.5% cases [21]. Dogra A and Kumar V, observed anaemia leading to blood transfusion in 38% patients [22].

The strength of the present study was that it helped in highlighting the higher burden and unsupervised harmful practice of consuming abortion pills and its consequences in Indian population, despite legalisation and confidentiality of MTP act. Based upon this study, following recommendations have been suggested. First, women and their family must be educated regarding the family planning methods and beneficiaries must be encouraged to use family planning method to prevent the untimely conception. Second, awareness regarding the medical termination of pregnancy act, its confidentiality clause must be created in general public so that they could utilise the safe services provided to them without compromising their health status. Third, education particularly female education or literacy level must be encouraged, so that they are able to perceive their right, right to choose the time of entering the motherhood, right to health. Fourth, over the counter availability of abortion pills must be banned and abortion pills should be dispensed only in presence of prescription signed and sealed by registered medical practitioner. Fifth, a dedicated centre for distribution of abortion pills must be made in each health centre to reduce the availability of over the counter medications.

Limitation(s)

The females who underwent complete abortion could have been missed as these women might may not feel the need of supervised abortions as well as are unaware of the consequences of unsupervised abortions.

CONCLUSION(S)

Though medical termination of pregnancy is legal in India, approximately half of women, irrespective of their marital status prefer using unsupervised abortion pills. The abortion pills not only increase maternal morbidity but also has been associated with maternal mortality. Anaemia and incomplete abortion rate remain high in cases of unsupervised abortion pill use. It is necessary to curtail this harmful practice and strict legislative laws must be enforced to limit and restrict the sales of over the counter abortion pills.

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