IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 21, Issue 7 Ser.5 (July. 2022), PP 39-44
www.iosrjournals.org

An evaluation of the method of induced abortion in a tertiary care hospital, Dhaka, Bangladesh

Akhter K[1], Najma A[2], Nahar S[3], Khan S[4], Jahan E[5]

[1]*Dr. Kulsum Akhter, Assistant Professor, Department of Obstetrics & Gynecology, Center for Women Child Health Hospital, Dhaka, Bangladesh*
[2]*Dr. Ayesha Najma, Consultant, Department of Obstetrics & Gynecology, Center for Women Child Health Hospital, Dhaka, Bangladesh*
[3]*Dr. ShamsunNahar, Consultant, Department of Obstetrics & Gynecology, Center for Women Child Health Hospital, Dhaka, Bangladesh*
[4]*Dr. Sanjida Khan, Assistant Professor, Department of Obstetrics & Gynecology, Center for Women Child Health Hospital, Dhaka, Bangladesh*
[5]*Dr. Eshrat Jahan, Consultant, Department of Obstetrics & Gynecology, Center for Women Child Health Hospital, Dhaka, Bangladesh*
Corresponding Author:Dr.KulsumAkther

Abstract
Introduction: *Abortion is a major social and public health concern. Complications from unsafe abortions are one of the primary causes of maternal death in Bangladesh. It's a major health issue. According to the World Health Organization, 14 percent of maternal fatalities are preventable which occur every year in South Asian nations, including Bangladesh, are caused by abortion. Theaim of the study was to observe methods used in induced abortion cases admitted at different maternity units of DMCH.*
Methods: *This prospective observational study was conducted at the Department of Obstetrics and Gynaecology, Dhaka Medical College Hospital, Bangladesh. The study duration was 6 months, from May 2007 to October 2007. A total of 80 cases were randomly selected from all induced abortion cases admitted in different maternity units of Dhaka Medical College Hospital (DMCH).*
Result: *50% of the participants were between the age of 21-30 years, all except 12.5% of the participants were multipara, a majority (46.25%) had 6-12 weeks of pregnancy before termination. The most common clinical presentation was amenorrhea and pervaginal bleeding, followed by pain in the abdomen. 58.75% of the abortions were performed by untrained personnel, while MR tube was the most common method of induced abortion among the participants of the present study. The overall mortality rate was 7.5% in the present study.*
Conclusion: *The study showed that the majority of induced abortion cases already had at least 1 child and did not want any more. The most common method used for induced abortion was menstrual regulation (MR) and D&C. Early abortion led to fewer complications, while prolonged pregnancy had a higher risk of complication during an abortion. The most common complication among the admitted participants was amenorrhea and pervaginal bleeding and pain in the abdomen.*

Keywords: *Pregnancy, Abortion, Induced*

Date of Submission: 12-07-2022 Date of Acceptance: 27-07-2022

I. Introduction

According to English law, abortion denotes the termination of pregnancy before the 24th week, that is before the fetus is viable.[1]But the timeline is changed somewhat in some countries, where medical facilities of resuscitation had not yet been developed as much. Bangladesh is also one of these countries, where the abortion term is considered up to the 28th week of pregnancy. Induced abortion is the deliberate termination of pregnancy in a manner that ensures that the embryo or fetus will not survive. An induced abortion may be therapeutic or non-therapeutic. It is estimated that approximately 1 out of every 4 pregnancies in the world is terminated by induced abortion.[2] Although the rate of induced abortion is very high globally, 78% of global abortions happen in developing and underdeveloped countries, with only 22% happening in developed countries. This discrepancy can be attributed to the different laws regarding abortion in different countries. Under normal circumstances, almost all major religions forbid abortion.[3]Every year some 36-35 million unwanted pregnancies are terminated either legally or illegally by induced abortions throughout the world. The exact number is not known, as statistics on induced abortion are not always reliable due to under-reporting even in countries where the practice is permitted and widely accepted; and as there is no adequate method to estimate the number of illegal abortions.

Unsafe abortion is a persistent but preventable pandemic in developing countries. Abortion is not just a medical, but also a social and demographic event in Bangladesh. Although non-therapeutic abortion is officially illegal in Bangladesh, it is widely practiced both in urban and rural areas. But this leads to an extremely high rate of maternal death every year caused by an abortion performed by unqualified practitioners. Safe technologies for inducing abortion are available including medical abortions (e.g., Mifepristone or misoprostol), manual vacuum aspiration, and curettage. Both traditional and non-traditional abortion can lead to complications such as fever, pelvic infection, peritonitis, perforation of hollow viscous, etc. These complications affect not only the individual women and their families but also the medical institutions and the national health budget. By creating public awareness, providing female health education and contraceptive knowledge, thus preventing unwanted pregnancies, we can greatly reduce maternal morbidity and mortality due to abortion. Induction of abortion can become necessary due to many factors, such as abnormal conceptus, cervical incompetence, immunological factors, maternal diseases, and even trauma. These factors can lead to induced abortion, but there is well-recognized controversy regarding the topic. The world is divided into three parts, one which only narrowly defined medical indications permit abortion, a second in which abortion remains therapeutic but with very liberal views on the interpretation of therapeutic, and a third where pregnancy can be terminated on socio-economic grounds alone, meaning on request or demand.[4]-[6]In the countries where abortion is illegal, abortion is commonly performed under unhygienic conditions by an untrained person. They introduce sticks or twigs into the uterus and consequently carry a serious risk of perforation of the uterus, severe bleeding, and infection. This method is most commonly used in developing countries due to the lack of experienced medical professionals, and high costs in the medical industry.[7],[8]Other non-medical methods of induced abortion include eating or drinking quinine or some indigenous abortifacient preparations. These can lead to poisoning, renal failure, or intense vomiting causing dehydration and eventual death unless proper therapy is instituted.[9]The increased availability of legal abortion since 1970 in developed countries has influenced the safety of abortion methods and the skill of clinicians. Methods used for inducing abortion depend upon the duration of pregnancy and the condition of women. Currently, menstrual regulation (MR) has replaced the traditional scraping technique (sharp curettage) as the primary means of terminating pregnancies and is used all over the world.[10],[11]Some other modern methods of abortion include Dilatation and curettage (D&C), hysterectomy, or the use of substances such as RU 486, Prostaglandin, hypertonic solution,etc. Many women suffer from serious ill-health after abortion. Maternal mortality and morbidity are more and more from septic induced abortion. The risk of death of a woman from spontaneous abortion and legal abortion is exceedingly rare. The present study was conducted with the aim of observing different methods of induced abortion in a tertiary care hospital in Bangladesh.

II. Objective

General Objective

- To observe the methods of induced abortion used in Bangladesh.

Specific Objectives

- To observe the maternal outcome of induced abortion

III. Methods

This prospective observational study was conducted at the Department of Obstetrics and Gynaecology,Dhaka Medical College Hospital, Bangladesh. The study duration was 6 months, from May 2007 to October 2007.A total of 80 cases were randomly selected from all induced abortion cases admitted in different maternity units of DMCH. After taking detailed history with special attention to menstrual history and type of induction a careful examination was done in all cases. Informed written consent was obtained from each participant, and the anonymity of the participants was ensured. Ethical approval was obtained from the ethical review committee of the study hospital. All necessary investigationswere done, blood grouping, Rh factor, and Hb% estimation were done in all cases. The cases were managed according to the clinical situation and complications were noted. All necessary pieces of information were noted in a preformed data collection sheet. Finally, the results were analyzed and presented in different tables.

Inclusion Criteria

- Age 15 and above
- Patients who had given consent to participate in the study.
- Induced Abortion cases

Exclusion Criteria

- Spontaneous abortion.
- Medical termination of pregnancy & MR cases
- Exclude those affected with other chronic diseases etc.

IV. Results

50% of the participants were between the age of 21-30 years, all except 12.5% of the participants were multipara, a majority (46.25%) had 6-12 weeks of pregnancy before termination. The most common clinical presentation was amenorrhea and pervaginal bleeding, followed by pain in the abdomen. 58.75% of the abortions were performed by untrained personnel, while MR tube was the most common method of induced abortion among the participants of the present study. The overall mortality rate was 7.5% in the present study.

Table 1: Age distribution of the participants (n=80)

Age group (In Years)	No. of patients	Percentage
15-20	13	16.25%
21-30	40	50%
31-40	27	33.75%

Among the participants, half (50%) were from the age group of 21-30 years, while 33.75% were between the age of 31-40 years, and only 16.25% of the participants were from the youngest age group of 15-20 years.

Table 2: Parity distribution of patients (n=80)

Parity	No. of cases	Percentage
0	10	12.5
1	5	6.25
2	35	43.75
3	20	25
4	10	12.5

43.75% of the participants had 2 previous full-term birth, and only 12.5% had no previous childbirth. The remaining participants all had at least 1 previous full-term birth.

Table 3: Distribution of cases by the duration of pregnancy (n=80)

Pregnancy Duration	No. of cases	Percentage
6-12 weeks	37	46.25
13-16 weeks	31	38.75
>16 weeks	12	15

The majority of the participants (46.25%) had come for abortion at 6-12 weeks of pregnancy, while 38.75% of the participants had 13-16 weeks of pregnancy. Only 15% of the participants (n=12) had been pregnant for over 16 weeks.

Table 4: Distribution of cases by a clinical presentation on admission (n=80)

Clinical presentation	No. of patients	Percentage
Amenorrhea and pervaginal bleeding	38	47.5
Pain in the abdomen	17	21.25
Shock	8	10
Fever	10	12.5
Abdominal distention	5	6.25
Oliguria	2	2.5

At the time of admission, 47.5% of the participants had amenorrhea and pervaginal bleeding, 21.25% had pain in their abdomen, 12.5% had a fever, 10% had shock, 6.25% had abdominal distention, 2.5% of the participants had oliguria.

Table 5: Distribution of participants by the person who conducted abortion (n=80)

Attendee	No. of cases	Percentage
Doctor	5	6.25
Trained person	13	16.25

Un-trained person	47	58.75
Self-induction	15	18.75

Among the participants, induction of abortion was conducted by professional doctors in only 6.25% of the participants, by trained personnel in 16.25%. For the majority of the participants (58.75%), abortion induction was performed by untrained personal, and the remaining 18.75% had self-induction of abortion.

Table 6: Method interference in induced abortion. (n=80)

Method	No. of cases	Percentage
Introduction of abortion stick	7	8.75
MR tube	40	50
D & C	10	12.5
Ingestion of drug	16	20
Drug & Local injection	7	8.75

MR tube was the most commonly used method of abortion induction, observed in 50% of the participants. 20% of the participants ingested drugs, and 8.75% of the participants used a drug or local injection for abortion induction. 12.5% of the participants use the D&C method, while the remaining 8.75% of the participants induced abortion by the introduction of an abortion stick.

Table 7: Interval between onset of abortion and admission to Hospital. (n=80)

Time interval	No. of cases	Percentage
≤1 Day	16	20
2-5 Days	19	23.75
6-10 Days	24	30
10 Days-1 Month	21	26.25

For most of the participants (30%), admission to hospital after onset of abortion took 6-10 days, 26.25% had admission during 10 days to 1 month of abortion, 23.75% had admission at 2-5 days of onset. The remaining 20% were admitted into the hospital within 24 hours of the onset of abortion.

Table 8: Treatment offered during Hospital stay (n=80)

Treatment		No. of cases	Percentage
Conservative treatment	Resuscitation with antibiotic	11	13.75
Surgery	Dilatation, evacuation and curettage	58	72.5
Laparotomy	Drainage of Pus	3	3.75
	Repair of Uterus	4	5
	Repair of gut	1	1.25
	Total abdominal hysterectomy	3	3.75

During the hospital stay of the participants, 72.5% were offered dilation, evacuation, and curettage (D&C), 13.75% were offered conservative treatments, and the remaining 13.75% of the participants were offered laparotomy. Among them, repair of the uterus was the most offered laparotomy (5%).

Table 9: Distribution of patients based on Hospital Stay (n=80)

Hospital stay	No. of cases	Percentage
1-2 Days	35	43.75
3-5 Days	21	26.25
6-14 Days	15	18.75
More than 2 weeks	9	11.25

The majority of the participants (43.75%) had very short hospital stays (1-2 days). 26.25% had a hospital stay of 3-5 days, 18.75% had a hospital stay of 6-14 days, and the remaining 11.25% had a hospital stay of over 2 weeks.

Table 10: Distribution of cases by outcome (n=80)

Outcome	No. of cases	Percentage
Satisfactory	74	92.5
Deceased	6	7.5

92.5% of the participants had satisfactory outcome, while 7.5% of the participants (n=6) died in the process of abortion induction.

Table 11: Cause of death among deceased participants (n=6)

Final Cause of death	Number of cases	Percentage
Septicemia with electrolyte imbalance	3	50
Renal failure	1	16.67
Hemorrhagic shock	2	33.33

Among the 6 deceased participants, the final cause of death was septicemia with electrolyte imbalance in 50% of the cases. Renal failure was observed in 1 patient (16.67%), while the remaining 33.33% of the participants died due to hemorrhagic shock.

V. Discussion

Abortion becomes necessary due to multitudes of reasons, and as such, Induced Abortion is performed in many pregnant women. But various methods of abortion can have various complications, even more so in traditional abortion methods. Due to the severity of complications following traditional induced abortion methods, physicians prefer more modern methods of induced abortion.[12],[13] The present study was conducted with the aim of observing induced abortion methods used in a tertiary care hospital in Dhaka, Bangladesh. During the study period, total gynecological admission was 2030, among which 925 were abortion cases and 148 were induced abortions. Among the induced abortion cases, only 80 were selected for the present study following inclusion and exclusion criteria. The incidence- of abortion of all type were 45.5% among gynecological admission, whereas was 16% of that abortion were induced. The ratio of induced abortion cases in our study was almost similar to another Bangladeshi study conducted in Mymensingh, where the induced abortion rate was 18%.[14]The present study showed that about 50% of patients belonged to the 21-30 years age group, and a majority (43.75%) were mothers of two children. Overall, only 12.5% of the participants had no previous pregnancy or childbirth. Similar results have been observed in other studies, with induced abortions occurring more in the multipara women population.[15],[16]This could be influenced by the determination of keeping the family short, as well as population control education sponsored by the government. In the present study, untrained personnel conducted abortion in 58.75% of cases. Although this percentage was extremely high, some older studies had presented a much higher percentage of participants who had an abortion performed by untrained personnel or quack doctors.[17]From these reports, it can be observed that although slowly, improvement in the medical sector has a great effect on decreasing cases of abortion performed by untrained personnel. Amenorrhea and pervaginal bleeding were the most prevalent clinical symptom, followed by pain in the lower abdomen. About 30% of patients got admitted within 6-10 days of abortion 23.75% of the patient come within 2-5 days after the abortion. Only 20% came to the hospital within 1 day of the abortion. The menstrual regulation tube was the most widely utilized technique of abortion induction, with 50 percent of individuals using it. Twenty percent of the individuals utilized medications, and 8.75 percent used pharmaceuticals or local injections to induce abortions. 12.5 percent of the participants used the D&C procedure, while the remaining 8.75 percent used the abortion stick to induce abortion. In total, over 20% of the patients relied on abortifacient drugs suggested by shopkeepers and were open to serious life-threatening complications. 46.25% terminated their pregnancy between 6-12 weeks, 38.75% of patients in between 13-16 weeks, and 15% of patient terminated their pregnancy after 16 weeks of gestation. Gestational age is an important factor in Complications after induced abortion. This high incidence of delayed abortion was probably due to the late diagnosis of pregnancy caused by delay in deciding because of religious fear or due to lack of knowledge regarding the availability of such services. Delayed termination of pregnancy can greatly increase the difficulty of abortion, as well as possible complications.[18],[19]management of 72.5% of cases was quite simple. Most of the patients (43.75%) could be discharged in 1-2 days. They underwent DE& C and were discharged the next day. The patients of induced abortion with shock also recovered promptly (10% of total patients) after resuscitation. Only 8.75% of patients had iatrogenic perforation which was treated by repair of the uterus and total abdominal hysterectomy accordingly. 1 patent had a gut injury and was managed by repair of

the gut. 3.75% of patients were managed by laparotomy followed by drainage of pus. Management of septic abortion was not simple. 6.25% of patients were presented with peritonitis and 2.5% presented with renal failure. They needed intensive care unit management and suffered a lot during their hospital stay. But it is a preventablecondition with good family planning facilities and proper counseling.7.5% of the total study participants died during or after their hospital stay while in care of the hospital. The final cause of death was septicemia with electrolyte imbalance in 50% of the cases. Renal failure was observed in 1 patient (16.67%), while the remaining 33.33% of the participants died due to hemorrhagic shock.

Limitations of The Study

The study was conducted in a single hospital with a small sample size. So, the results may not represent the whole community.

VI. Conclusion

The study showed that the majority of induced abortion cases already had at least 1 child and did not want any more. The most common method used for induced abortion was menstrual regulation (MR) and D&C. Early abortion led to fewer complications, while prolonged pregnancy had a higher risk of complication during abortion. The most common complication among the admitted participants was amenorrhea and pervaginal bleeding and pain in the abdomen.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

References

[1]. Jeffcoate N, Malhotra N. In: Jeffcoate's principles of gynaecology. 6th ed. Jaypee Brothers Medical Publ.; 2014. p. 151.
[2]. DeCherney AH, Nathan L. Current Obstetric & Gynecologic Diagnosis & Treatment. New York: Lange Medical Books/McGraw-Hill; 2003.
[3]. Hedayat KM, Shooshtarizadeh P, Raza M. Therapeutic abortion in Islam: contemporary views of Muslim Shiite scholars and effect of recent Iranian legislation. Journal of medical ethics. 2006 Nov 1;32(11):652-7.
[4]. Luker K. Abortion and the Politics of Motherhood. University of California Press; 1985 Aug 4.
[5]. Boland R, Katzive L. Developments in laws on induced abortion: 1998-2007. International family planning perspectives. 2008 Sep 1:110-20.
[6]. Packer HL, Gampell RJ. Therapeutic abortion: A problem in law and medicine. Stanford Law Review. 1959 May 1:417-55.
[7]. Hull TH, Sarwono SW, Widyantoro N. Induced abortion in Indonesia. Studies in Family Planning. 1993 Jul 1:241-51.
[8]. Barreto T, Campbell OM, Davies JL, Fauveau V, Filippi VG, Graham WJ, Mamdani M, Rooney CI, Toubia NF. Investigating induced abortion in developing countries: methods and problems. Studies in family planning. 1992 May 1:159-70.
[9]. Grossman D, Raifman S, Bessenaar T, Duong LD, Tamang A, Dragoman MV. Experiences with pain of early medical abortion: qualitative results from Nepal, South Africa, and Vietnam. BMC women's health. 2019 Dec;19(1):1-1.
[10]. Crouthamel B, Pearson E, Tilford S, Hurst S, Paul D, Aqtar F, Silverman J, Averbach S. Out-of-clinic and self-managed abortion in Bangladesh: menstrual regulation provider perspectives. Reproductive Health. 2021 Dec;18(1):1-2.
[11]. Alam MZ, Sultan S. Knowledge and practice of menstrual regulation (MR) in Bangladesh: Patterns and determinants. Journal of Population and Social Studies [JPSS]. 2019 May 24;27(3):220-31.
[12]. Bankole A, Kayembe P, Chae S, Owolabi O, Philbin J, Mabika C. The severity and management of complications among Postabortion patients treated in Kinshasa health facilities. International perspectives on sexual and reproductive health. 2018 Mar 1;44(1):1.
[13]. Qureshi Z, Mehrtash H, Kouanda S, Griffin S, Filippi V, Govule P, Thwin SS, Bello FA, Gadama L, Msusa AT, Idi N. Understanding abortion-related complications in health facilities: results from WHO multicountry survey on abortion (MCS-A) across 11 sub-Saharan African countries. BMJ global health. 2021 Jan 1; 6(1):e003702.
[14]. Ahmed S. Types and abortion and its consequences -- a study of 100 cases in Mymensingh Medical College Hospital [FCPS Dissertation]. Dhaka: Bangladesh College of Physicians and Surgeons; 2003
[15]. Rogo KO. Induced abortion in sub-Saharan Africa. East African Medical Journal. 1993 Jun 1;70(6):386-95.
[16]. Chae S, Desai S, Crowell M, Sedgh G, Singh S. Characteristics of women obtaining induced abortions in selected low-and middle-income countries. PloS one. 2017 Mar 29; 12(3):e0172976.
[17]. Begum M. Clinical Presentation, Management & outcome of septic abortion in SSMCH, Dhaka : BCPS 1992.
[18]. Kruse B, Poppema S, Creinin MD, Paul M. Management of side effects and complications in medical abortion. American journal of obstetrics and gynecology. 2000 Aug 1; 183(2):S65-75.
[19]. Thonneau P, Fougeyrollas B, Ducot B, Boubilley D, Dif J, Lalande M, Soulat C. Complications of abortion performed under local anesthesia. European Journal of Obstetrics & Gynecology and Reproductive Biology. 1998 Oct 1;81(1):59-63.

Akhter K, et. al. "An evaluation of the method of induced abortion in a tertiary care hospital, Dhaka, Bangladesh."*IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 21(07), 2022, pp. 39-44.