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Original Research Article

Clinico-Pathological Outcome of Induced Abortion among the Patient Admitted in DMCH

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Abstract

Background*:** Abortion is defined as the loss or termination of a pregnancy before 20 weeks of gestation or when the fetus weighs less than 500 g. Induced abortion is defined as the use of medications or surgical intervention to stop pregnancy after implantation but before the embryo or fetus has become independently viable. The purposeful termination of a pregnancy, known as induced abortion, is one of the most common gynecological treatments. In this study, attempts have been made to show the clinical presentation, management, and outcome of patients. ***Aim of the study: The study aimed to assess the outcome of a patient after induced abortion. ***Methods*:** It was a prospective observational study. The study was conducted at the Department of obstetrics and gynecology, Dhaka Medical College Hospital, Dhaka, Bangladesh during May-Oct'2007 from all induced abortion cases admitted in different maternity units, 80 cases are randomly selected for the study. Proper ethical consent was taken from the concerns. All necessary investigation was done, and necessary pieces of information were noted in a preformed data collection sheet. Finally, the results were analyzed and presented in different tables using a computer and the SPSS database. ***Result:*** In this study, it has been seen that around 45.5% of gynecology patients are of abortion, and the incidence of induced abortion was 16% among all gynecological admission. The majority of abortion cases (58.75%.) were conducted by untrained persons. Among the patients, 8.75% had adequate knowledge about MR, while 51.25% had unreliable or incorrect information regarding MR. 55% of cases had used contraceptives. A total of 76.25% of patients got admission within 1 month of their complications. Among all cases, 92.5% were improved while the death rate was 7.5%. Amongst 23 specimens of high vaginal swab culture 15 (65.22%) patients showed growth of Escherichia coli, 3 (13.5%) of staphylococcus, 3 (13.5%) of pseudomonas, 1 (4.34%) of protus, 1 (4.34%) of klebsiella. ***Conclusion*:** All this can be reduced by improving socioeconomic condition, educational status, popularizing family planning, and modernization of existing laws in relation to abortion.

Keywords: Obstetrics, abortion, contraceptive, socioeconomic, gynecology.

INTRODUCTION

The rate of induced abortion is very high; 48 million women around the world have an abortion each year, of those 78% live in developing countries and 22% in developed countries. According to English law, abortion denotes the termination of pregnancy before the 24th week, that is before the fetus is viable.[1] But in Our country, the facilities of resuscitation had not yet been developed as much as to the level at which a preterm baby of less than 28th week can 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] For every 1000 women of childbearing age 35 are estimated to have an induced abortion every 3 years. Worldwide the lifetime average is one abortion per woman.[3] Every year some 36-35 million unwanted pregnancies are terminated either legally or illegally by induced abortions throughout the world. Almost half of

all abortions in the world occur under unsafe conditions and nearly all of them (97%) are in developing countries. An estimated 68,000 women and girls die each year as a result of unsafe abortion. The maternal mortality rate is estimated globally to be 320 per 100,000, with induced abortion contributing to about 13% of maternal deaths.[4] There is a significantly low titer antinuclear antibodies (ANA) in patients with unexplained fetal loss before viability than in normal control subjects.[5] ANA titer is between 1:20 and 1:60 in these groups of patients. Other than serology and the history of prior pregnancy losses, these patients have no signs or symptoms and do not fulfill established criteria for the diagnosis of lupus.[6] The possibility that abortions result from some maternal immunological rejection of the fetal allograft. Compared with women who carry a pregnancy to term, women who are habitual aborters have the following characteristic.[7] They share more HLA-A and B with their partners; have fewer inhibitors of cell-mediated immunity; are more likely to have an absence of transplantation antigen; have more fetuses that are transplantation antigen comparable. Approximately 70% of the women exposed to utero to diethylstilbestrol (DES) have a small T-shaped uterus and abnormally high frequency of poor pregnancy outcome.[8] Progesterone deficiency has been a well-known cause of early pregnancy loss because of its well-known effect in maintaining uterine quiescence. Most of the evidence of progesterone deficiency in early pregnancy loss comes from studies demonstrating that luteal phase deficiency occurs more frequently in patients with recurrent abortion than in control patients.[9] Spontaneous abortion occurs more frequently in patients with polycystic ovary syndrome than in normal control subjects.[10] Elevated serum LH concentration case of PCO passively has a deleterious effect on corpus luteum.[11]

Abortion is a medical, social, and demographic event in Bangladesh. Although nontherapeutic abortion is officially illegal in Bangladesh, this is still widely practiced both in urban and rural areas. Every year in Bangladesh an unacceptable proportion of maternal death occurs due to complications of an abortion performed by unqualified practitioners.

METHODS

This prospective observational study was conducted at the Department of obstetrics and gynecology, Dhaka medical college hospital, Dhaka, Bangladesh for 6 months, from May to October of 2007. The study sample size was selected from all induced abortion cases admitted in different maternity units of DMCH. A total of 80 cases were randomly selected for the study. After taking detailed history with special attention to menstrual history and type of induction, a careful examination was done in all cases where Spontaneous abortion and medical termination of pregnancy & MR cases were excluded. Proper ethical consent was taken from the concerns. The necessary investigation was done, blood grouping and 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 information was noted in a preformed data collection sheet. Finally, the results were analyzed and presented in different tables using a computer and the SPSS database.

OBJECTIVES

General Objective

- To assess the outcome of patients presenting with induced abortion.

The specific objectives are

- To determine the incidence of induced abortion in DMCH.
- To determine the method of induced abortion.
- To evaluate the various pathological findings in induced abortion.
- To find out the extent of morbidity and mortality of induced abortion.
- To recommend measures to reduce the risk factor contributes to induced abortion.

RESULT

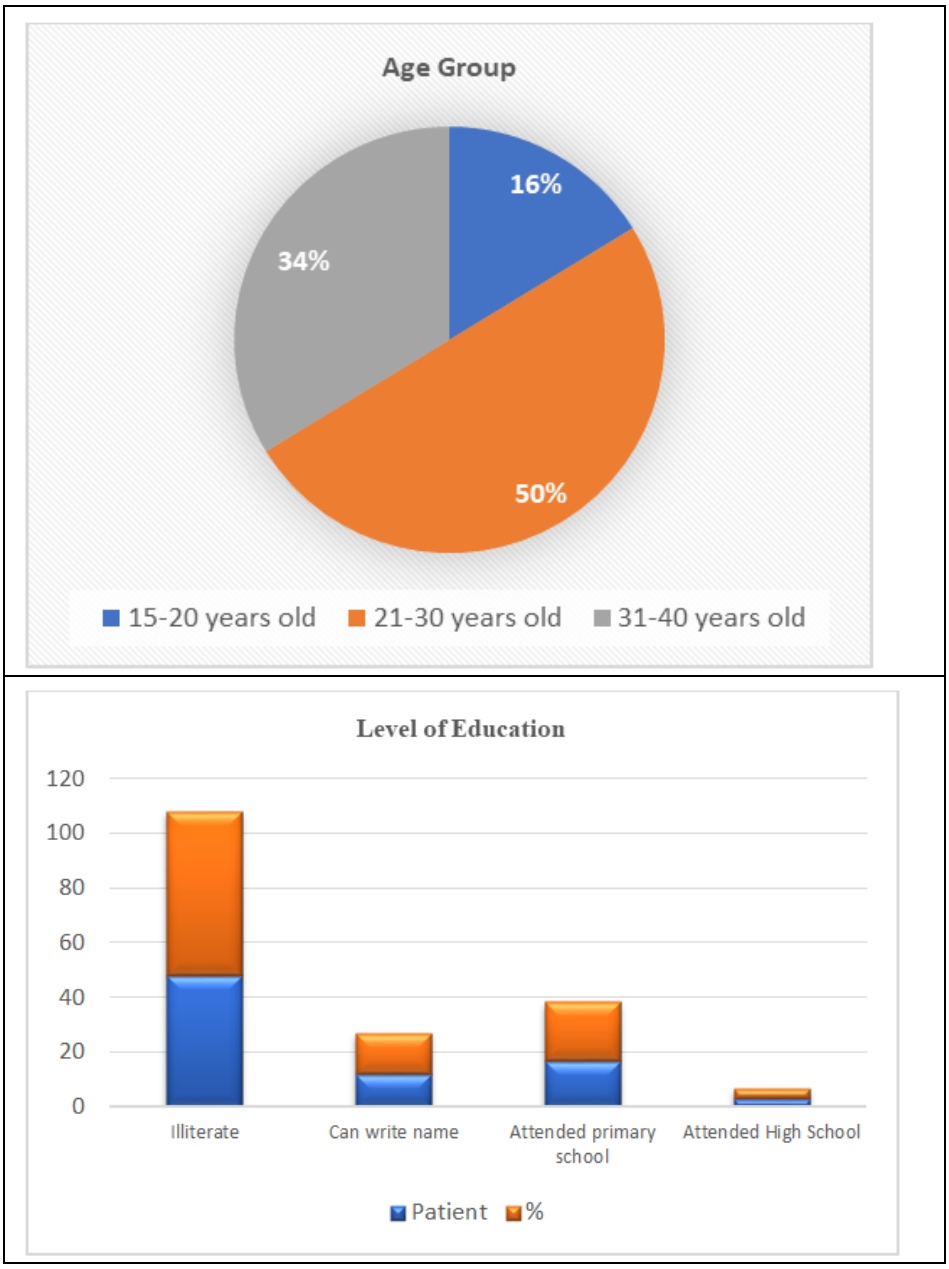
Among a total of 2030 gynecological admission, 925 were total abortion cases, and among them, 148 were induced abortion cases. In percentage, 45.5% cases were abortion in all gynecological admission. Sixteen percent of cases were induced abortion. Most of the patients in the study group were 21-30 years group (50%). Maximum of the patients were illiterate there is about 60%, only 15% could write their name, 21.25% attended Primary School and only 3.75% went to High School. All-out of patients 58.7% were housewives 32.5% were day labor only 8.75% was service holder. The majority (93.75%) were from lower socio-economic conditions. Among the total patients, 12.5% had no child. They tried to terminate the pregnancy as the conception occurs after a short interval of their marriage. 6.25% had a single child, 43.75% had two children, 25% had 3 children 12.5% had 4 children. The majority of abortion cases (58.75%) were conducted by untrained persons, and among 18.75%, self-induction was done. The choice of abortion methods and services by women was found to be a major determinant of abortion-related complications. As the majority of patients were illiterates and poor they did not go to a trained person. Out of 80 patients, 85% came from urban areas and 15% were from rural areas. Many patients came with single or multiple presentations. But most came with per vaginal bleeding which ranged from slight spotting to severe hemorrhage after abortion. 8.75% of patients had adequate knowledge about MR. 51.25% had incorrect and inadequate knowledge while 40% were not informed. 55% of cases had used contraceptives at some times and 45% had never used any contraceptive. Only 20% of the patient got admitted immediately

within 24 hours of the onset of abortion, where 23.75% got admitted within 2 to 5 days, 30% were admitted 6 to 10 days, and 26.25% of patients got admitted within 10 days to 1 month. Out of 80 patients, 37.5% showed septic features. Among all cases, 92.5% were improved while the death rate was 7.5%. Amongst 23 specimens of high vaginal swab culture 15 (65.22%) patients showed growth of Escherichia coli, 3 (13.5%) of staphylococcus, 3 (13.5%) of pseudomonas, 1 (4.34%) of protus, 1 (4.34%) of klebsiella.

Table-1: Incidence of induced abortion (n=80)

Total gynecological admission	Total abortion	Total induced abortion	Incidence
2030	925	148	45.5% of cases are abortion in all gynecological admission. 16% are induced abortion.

Table 1 shows 45% of cases of all gynecological admission were abortions. Among them, 16% were induced abortions.



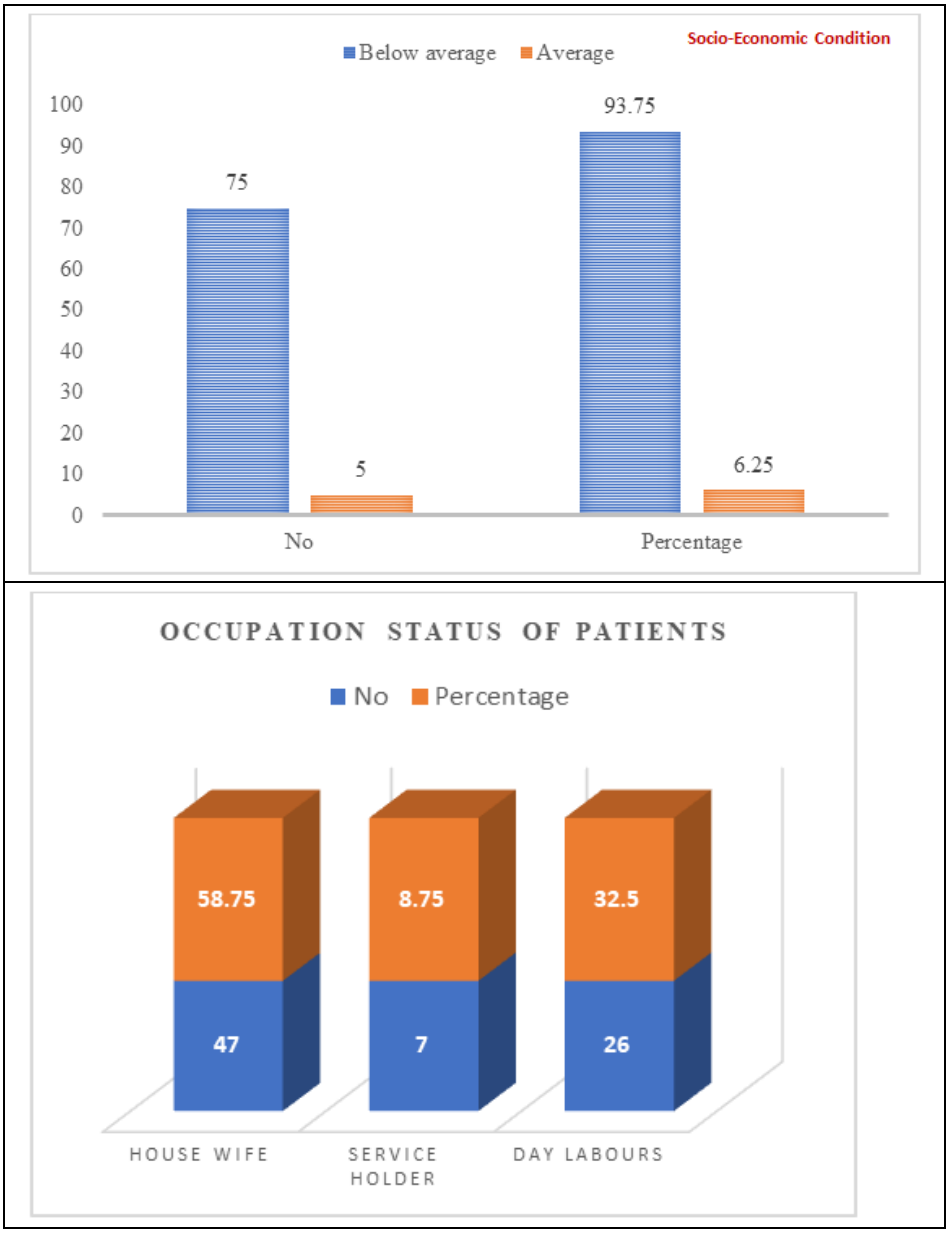


Figure-1: Age, education level, Cases according to socio-economic condition, and Occupation of the patients (n=80)

Figure 1 shows that most of the patients of the study group were 21-30 years group (50%). Most of the patients were illiterate there is about 60%, only 15% could write their name, 21.25% attended Primary School and only 3.75% went to High School. A maximum number of patients (58.7%) were housewives, 32.5% were day laborers, and only 8.75% were service holders. The majority (93.75%) were from lower socio-economic conditions.

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

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

12.5% of the patient had no child. 6.25% had a single child, 43.75% had two children, 25% had 3 children 12.5% had 4 children.

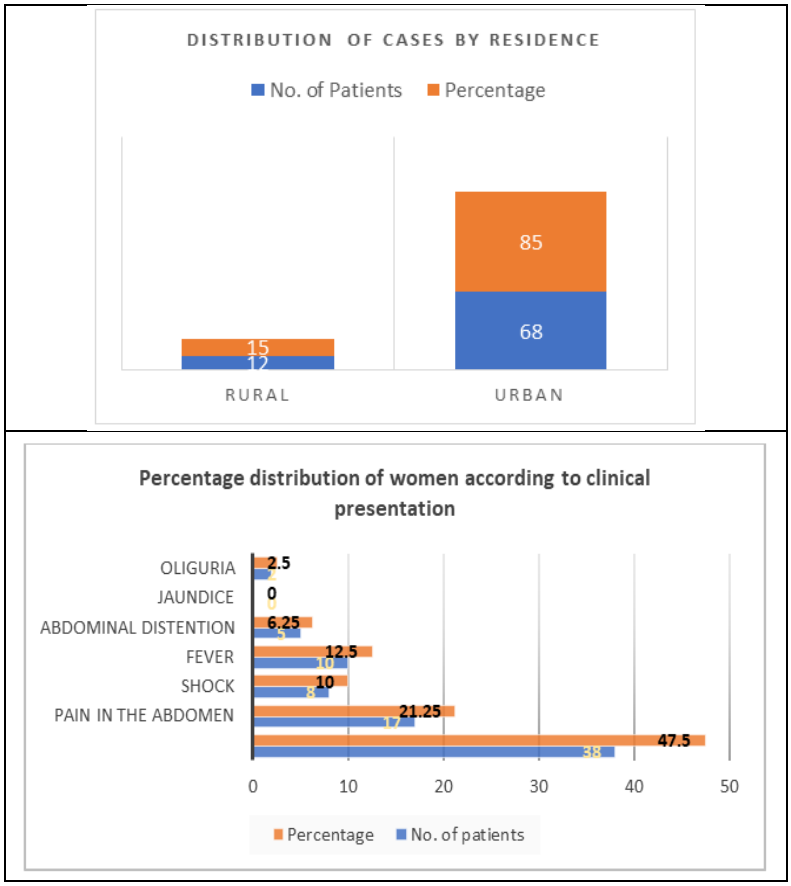


Figure-2: Distribution of cases by residence and Percentage of women according to clinical presentation (n=80)

Out of 80 patients, 85% came from urban areas, and 15% were from rural areas. Many patients came with single or multiple presentations. But most came with per vaginal bleeding (47.5%) which ranged from slight spotting to severe hemorrhage after abortion.

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

Duration	No. of Patients	Percentage
6-12 weeks	37	46.25
13-16 weeks	31	38.75
16+ weeks	12	15

The duration of pregnancy is very important regarding morbidity and mortality associated with abortion. 46.25% of the patients were induced in 6-12 weeks of pregnancy, 38.75% were induced in 13-16 weeks, and the remaining 15% got induced beyond 16 weeks of gestational age.

Table-4: Method interference in induced abortion and person who conducted abortion. (n=80)

Method	No. of Patients	Percentage
Abortion Method		
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
Abortion Conducted by		
Doctor	5	6.25
Trained person	13	16.25
Un-trained person	47	58.75
Self-induction	15	18.75

Table 4 shows that the majority of abortion cases (58.75%) were conducted by untrained persons, while among 18.75% self-induction was done.

Table-5: Knowledge about MR and distribution of cases by use of contraceptives (n=80)

Information gathered about MR	No. of Patients	Percentage
Correctly informed	7	8.75
Incorrectly informed	41	51.25
Not informed	32	40%
Use of contraceptives		
Use at sometime	44	55
Not used at all	36	45

Table 5 shows that 8.75% of patients had adequate knowledge about MR. 51.25% had incorrect and inadequate knowledge, while 40% were not informed. 55% of cases had used contraceptives at some times and 45% had never used any contraceptive.

Table-6: Interval between the onset of abortion and admission to Hospital. (n=80)

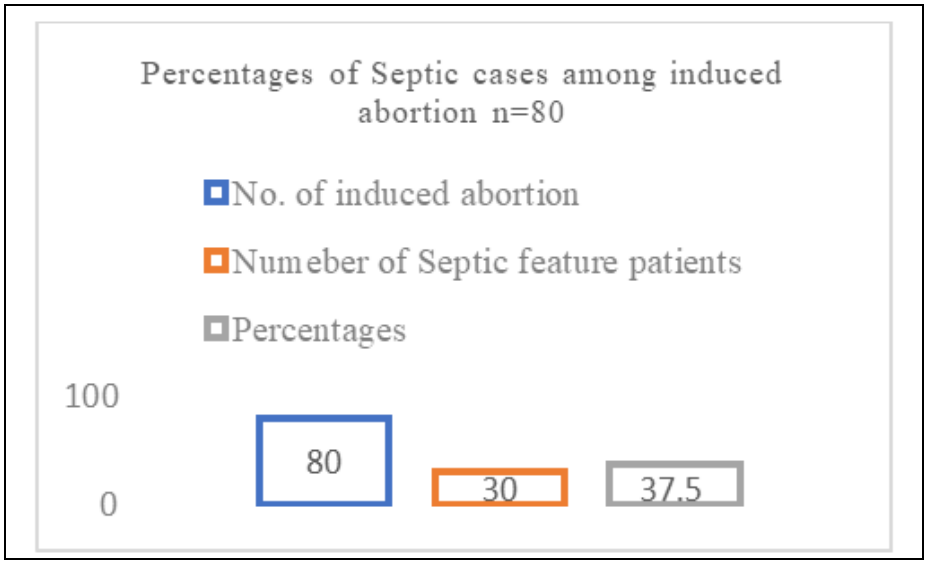
Time interval between onset of abortion and Hospitalization	No. of Patients	Percentage
Few less hour to >1 Day	16	20
2-5 Days	19	23.75
6-10 Days	24	30
10 Days-1 Month	21	26.25

20% of the patient got admitted immediately within 24 hours of the onset of abortion. 23.75% got admitted within 2 to 5 days, 30% were admitted 6 to 10 days, and 26.25% of patients got admitted within 10 days to 1 month.

Table-7: Treatment offered during Hospital stay (n=80)

Treatment		No. of Patients	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

Most of the patients (72.5%) needed dilatation, evacuation, and curettage.



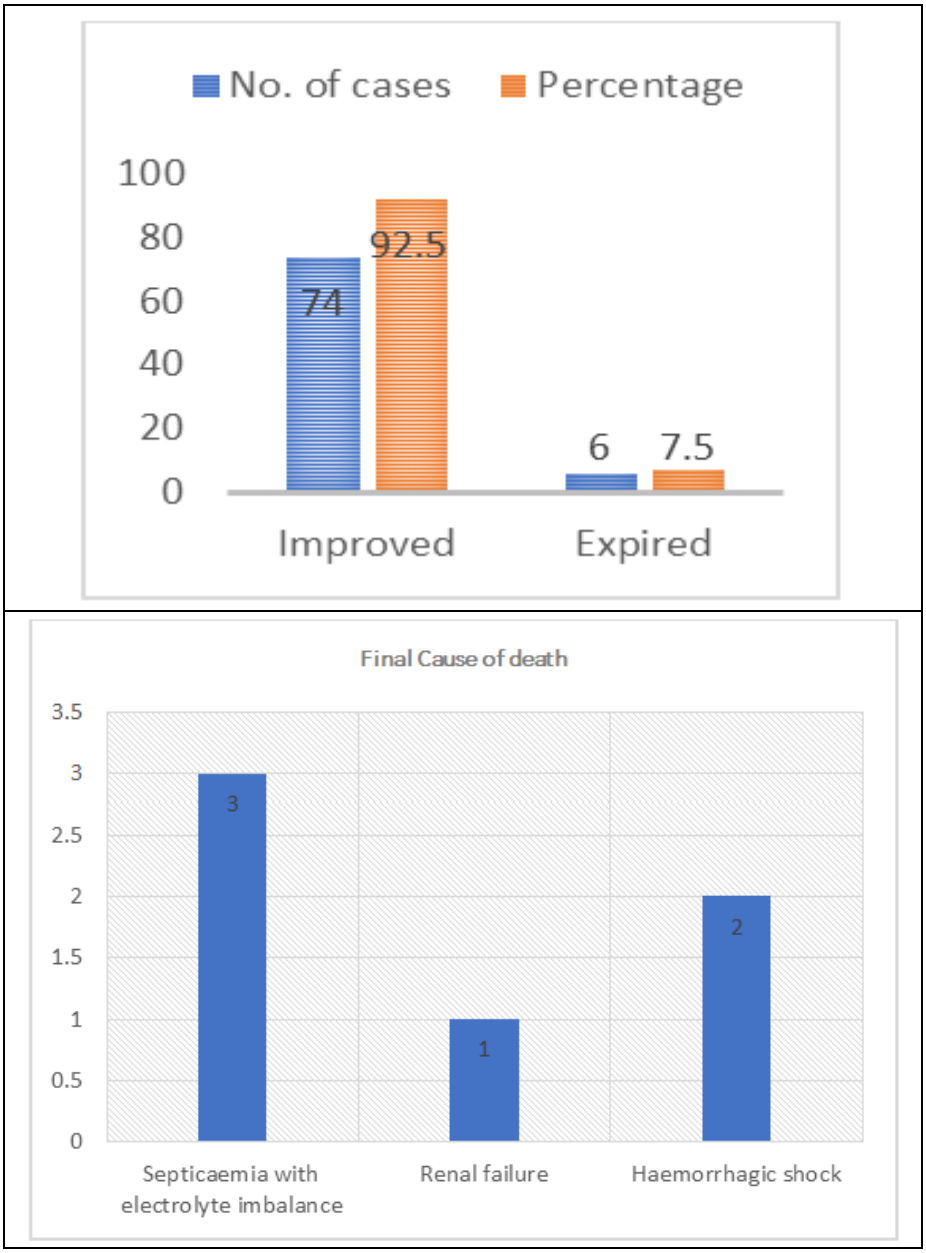


Figure 3: Percentage of Septic and cases among induced abortion and distribution of cases by outcome (n=80)

The above figure describes that among 80 patients 37.5% showed septic features. Out of all cases, 92.5% were improved while the death rate was 7.5%.

Table-8: Aerobic culture of the high vaginal swab (n=23)

Isolated organism	Number of patients	Percentage
Escherichia coli	15	65.22
Staphylococcus aureus	3	13.05
Pseudomonus	3	13.05
Proteus	1	4.34
Klebsiella	1	4.34

Among 23 specimens of high vaginal swab culture, 15 (65.22%) patients showed growth of Escherichia coli, 3 (13.5%) of staphylococcus, 3 (13.5%) of pseudomonas, 1 (4.34%) of protus, 1 (4.34%) of klebsiella.

DISCUSSION

Induced abortion, although sometimes necessary, has its own set of risks, especially after the abortion. Risk factors include standing, walking, sitting for more than 2 hours at work, exposure to vibration at work, commuting to work, carrying loads over 9 kg,

drinking alcohol over the first month of pregnancy [12]. 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 the interpretation of therapeutic where pregnancy can be terminated on socio-economic grounds alone, and this means on the request or demand [13]. Forty percent of the world's people live in countries where abortion is permitted; on the other hand, there are countries where it is permitted only when a women's life is at risk [14]. Thirdly the nature of infection depends upon the organism responsible and its virulence and the nature of the inflammatory response and its ability to localize the infection at its site [15]. An illegal abortion can be a hundred times more dangerous than a legal termination at the hands of an expert [16]. Though sepsis develops commonly after criminal abortion, it may occur in women who are sexually active immediately following the spontaneous abortion [17]. The incidence of abortion of all type were 45.5% among gynecological admission, where 16% of that abortion was were induced. In Mymensingh Medical College Hospital where 18% of cases were induced abortion [18]. Another study was done in DMCH in 2004, findings were induced abortion 28.54% of all gynecological admission and 57.33% of all abortions [19]. But in this study, it was found only 7.3% of total gynecological admission. It reflects the decreasing incidence of induced abortion within 3 years. This study showed that about 50% of patients belonged to the 21-30 years age group and the majority 43.75% were mothers of 2 children, 93.75% were coming from low socioeconomic conditions. Most of them (60%) were illiterate, and occupation-wise, most were housewives (58.75%) (Figure 1). Another study's findings were 65% within 21-30 years old, while the majority of patients had 2 children (27%) and 80% were from low socioeconomic conditions. These percentages were consistent with the findings of our study. Among the participants of our study, most (85%) of the patients were from urban areas, while only 15% of patients were coming from rural areas (Figure 2). The study also showed that in 58.75% of cases, abortions were performed by untrained personnel (Table 4). It was reported that 63% of abortion was done by untrained persons [19]. Alternative studies showed that 82.8% of abortions were performed by untrained persons [20]. From these two previous reports are improving and medical facilities are available nowadays. Most of the patients present with p/v bleeding and pain in the lower abdomen after abortion (47.5% & 21.25%) (Figure 2). In this study, 55% of cases used contraception at some time while the other 45% never used any form of contraceptives (Table 5). Reported 52% of women had been used contraceptives [19]. A little bit increasing the percentage of contraceptive uses. Knowledge about MR revealed that 40% of cases were not informed, 51.25% were incorrectly informed, and only 8.75% were correctly informed about MR (Table 5). About 50% of patients had induced abortion with the aid of Kerman cannula, but complications arose beyond 10 weeks of pregnancy when the abortion was performed by an untrained person (Table 4). The traditional method of induction like the abortion stick was used only in 8.75% of cases. In another similar study, it was reported that 26% of patients used abortion sticks [19]. Many patients (20%) took various kinds of abortifacient drugs by themselves or from a shopkeeper and developed serious life-threatening complications like anuria and death. It was shown that 46.25% terminated their pregnancy in between 6-12 weeks, 38.75% of patients in between 13-16 weeks, and 15% of patients terminated after 16 weeks. Gestational age is an important factor in regards to complications after induced abortion (Table 3). The study found that 37.5% of patients developed features of septic among induced abortions, as most of them were done under unhygienic conditions by an untrained person. 92.5% of patients had improved condition at the time of discharge, this may be due to the fact DMCH is one of the largest hospitals situated in the center of the capital and has better facilities to manage complicated or critically ill patients. Among the participants, there were 6 maternal deaths. While many patients had more than one complication when referred to this hospital, the most common final cause of death was septicemia with peritonitis and renal failure (Figure 3). Death was common among the septic cases. In a different study, the incidence of mortality was 13% [21], while another study showed a maternal mortality rate of 11% [19]. But in the present study, it was 7.5%, reflecting a decreasing mortality rate.

Limitation of study

As this study was conducted over only 6 months and the sample size was small, so a large-scale study would be needed to come to a definitive conclusion. Long-term sequel of the patients could not be evaluated as the patients are poor and many patients came here for treatment from distant areas. After discharge, they never came for follow-up. Investigation facilities were also limited.

CONCLUSION

Maximum patients came from low-socioeconomic conditions and were illiterate and had negligible contraceptive knowledge and practice. The majority had induced abortion because they did not want more children, therefore if women are given knowledge about modern contraceptives, they may start using them rather than abortion to control their fertility.

RECOMMENDATION

The economic condition of the people must be improved and education of the women should be encouraged so that they can develop self-esteem and become more conscious about their health and fertility;

Health workers of the root level must be more accountable and transparent about their job. They should give the correct information about contraceptives and MR to the women; the government should supply adequate drugs, equipment and install intensive care units; Liberalization of the existing abortion law so that women can get the safe service of the registered health personnel.

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