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Original Research Article

A review of medical termination of pregnancy profile in a tertiary care center

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ABSTRACT

Background: The Medical Termination of Pregnancy Act (MTP Act) came into force from 01 April 1972 and again revised in 1975. The objective was to study demographic profile, methods, various indications and complications due to Medical Termination of Pregnancy performed in our institution.
Methods: The present study was carried out in the Department of Obstetrics and Gynecology, BMCRI Bangalore India from November 2015 to October 2016 for 1year. After thorough history including reasons for MTP, detailed examination, investigations and consent, 522 women underwent MTP using various methods in one year at Vani Vilas hospital. Women were observed for any complications and then discharged.
Results: In present study, 522 women fulfilling inclusion criteria underwent MTP. MTPs performed during 1st trimester was 411 (78.8%) and in mid-trimester were 111 (21.2%). Common indications for MTPs were contraceptive failure 262 (50.4%) followed by 'to prevent grave injury to the physical and mental health of the pregnant women' 112 (23.2%). 326 women underwent manual vacuum aspiration (MVA). Mid-trimester MTPs were done by Foleys with additional misoprostol 106 (20.4%). Overall complication rate was less 143 (27.3%). Most common complication found amongst the women who underwent MTP was Gastrointestinal 51 (9.7%).
Conclusions: The most common reasons for medical termination of pregnancy (MTP) is unwanted pregnancy due to nonuse of contraceptives by the women of reproductive age group. There is a need to focus on unmet need for family planning services including medical termination of pregnancy (MTP) services.

Keywords: Contraceptive failure, Foleys, MTP, MVA

INTRODUCTION

From historical times termination of pregnancy was practiced with or without legal and social sanctions. Because of greater safety nowadays abortion has gained tremendous popularity in the last few years to get rid of unwanted child.[1]

To avoid the misuse of induced abortions, the Medical Termination of Pregnancy Act (MTP Act) was enacted by the Indian Parliament in 1971 and came into force from 01 April 1972. The MTP Act was again revised in 1975.[2]

Every year, on an average, about 210 million women become pregnant throughout the world. Approximately, one-third of these or 75 million pregnancies ends in stillbirth, spontaneous or induced abortions.

About 42 million of induced abortion are performed each year, of which 20 million of the total abortions are thought to be unsafe. WHO estimates 47,000 of deaths

per year are attributable to unsafe abortion, making abortion a leading cause of maternal mortality.[3] Maternal mortality is lowest in 1st trimester abortion (0.6/1000 procedures). Relative risk of mortality doubles for each 2weeks after 8 weeks.

This study is important for community health workers concerned with maternal health, demographers and family planning program specialists. This study is being conducted to review the demographic profile and also to find out changing trends in indications of Medical Termination of Pregnancy and its complications in present era.

Objectives of present study were

- to evaluate the number of Medical Termination of Pregnancy performed in our institution over a period of 1year.
- to evaluate the methods of Medical Termination of Pregnancy performed in the institution.
- To observe indications for Medical Termination of Pregnancy performed in 1st trimester and mid-trimester of pregnancy.
- to find out complications due to Medical Termination of Pregnancy.

METHODS

The present study was carried out in the Department of Obstetrics and Gynecology, BMCRI Bangalore India from November 2015 to October 2016.

It was a hospital based prospective observational study. About 522 women fulfilling inclusion criteria according to MTP Act, 1971 underwent Medical Termination of pregnancy (MTP) in our tertiary care hospital.

Inclusion criteria

1. All women who were medically fit and undergone medical termination of pregnancy according to Medical Termination of Pregnancy (MTP) act 1971.
2. Medical Termination of Pregnancy (MTP) indications included are:

- In order to save the life of the pregnant women.
- In order to prevent grave injury to the physical and mental health of the pregnant
- women.
- In view of the substantial risk that if the child was born, it would suffer from such
- physical or mental abnormalities as to be seriously handicapped.
- Pregnancy caused by rape.
- Pregnancy as result of contraceptive failure.

3. All patients who has undergone 1st and mid trimester Medical Termination of Pregnancy with different methods were included

Exclusion criteria

- Patients of medical abortion lost to follow up.
- Patient undergone MTP at other center and then referred.
- Vesicular mole, septic abortion.

Women who came to Department of Obstetrics and Gynecology either admitted through Family Planning Outpatient Department (OPD) or came to emergency department willing for MTP on valid grounds were included in this study after taking informed consent. Structured questionnaires were administered to these patients pertaining to socio-demographic status, obstetric history and reasons for the abortion. All records, registers in study period maintained in our tertiary care hospital were used for this purpose. About 522 women who underwent Medical Termination of Pregnancy were studied. Pelvic examination was carried out. Blood investigations were done for these procedures according to requirements. An obstetric ultrasound examination was performed. Consent on C Form obtained.

Depending on period of gestation, type of method of Medical Termination of Pregnancy (MTP) was selected.

- Those undergoing medical abortion received mifepristone 200mg orally followed 48 hours later by misoprostol 800mcg per vagina. Both were given in the hospital under supervision and the women remained under observation for at least 4 hours after receiving misoprostol. At follow up 2 weeks after initiating treatment, transvaginal ultrasonography was performed when required.
- In case of failure or if ultrasonography demonstrated continuing pregnancy, surgical evacuation was done. MVA was done by 60ml manual vacuum aspiration double valved syringe. The uterine contents aspirated were taken on a gauze piece and examined to identify gestational sac.
- For second trimester a Foley's catheter No.16 was introduced inside the cervix in the extra amniotic space with additional misoprostol 400mcg every 4th hourly maximum of 5 doses.The uterine contractions were augmented using intravenous oxytocin drip. If the abortion process was incomplete, then Dilatation and evacuation was performed.
- All patients were monitored clinically with two hourly assessments of maternal temperature, pulse, blood pressure and respiratory rate.
- In case of failure in 72 hours, hysterotomy as a last resort was tried. Hysterotomy as a mini caesarean section was performed in women with mid-trimester willing for concurrent sterilization or in some cases of failure in the induction of abortion.

Those patients who underwent Hysterotomy and willing for permanent contraception, tubal ligation was done and those willing for I.U.D.s, Cu-T were inserted just after procedure. For other people willing for pills and other

contraceptive methods, all were explained to them. Those patients who underwent surgical management, postoperatively were observed in the ward for any complication. At discharge, they were advised to come to follow up visits if any PV bleeding, abdominal pain, fever, vaginal discharge etc. Those who did not come for follow up visits were presumed to be without any complication. All the results were plotted in a master chart. Descriptive frequencies, percentage and charts were used and data analysis was done.

RESULTS

In present study, maximum women who underwent MTP were 21-34 (63.7%) years. The youngest was 15 years (only minor observed) and eldest being 40 years old. Out of 522 MTPs performed; women from urban area were 349 (66.9%). Also, it is seen that urban women reported earlier i.e. in first trimester for MTP, while women from rural area reported late in mid-trimester.

Out of 522 majority i.e. 352 (67.4%) were Hindus, as majority of residents in our state are hindus.107 (20.4%) were Muslims and rest were others 63 (12.2%) due to religious restrictions of abortions. Majority i.e.493 (94.4%) were married and only 29 (5.6%) were unmarried girls.

Majority women were of Lower Upper 197 (37.7%) and middle class 190 (36.4%) as per modified Kuppuswami's socioeconomic status scale. Out of 522 MTPs performed 93 (17.8%) were primi gravida and 152 (29.1%) of women were second gravida. 277 (53.1%) were third gravida and above, majority were unwanted pregnancy preventable by contraceptives. MTPs performed during first trimester were 411 (78.8%) and in mid-trimester were 111 (21.2%) (Table 1).

Table 1: Sociodemographic features.

Sociodemographic features		No.	%
Age	<20	121	23.1
	21-34	332	63.7
	≥35	69	13.2
Residence	Rural	173	33.1
	Urban	349	66.9
Religion	Hindu	352	67.4
	Muslim	107	20.4
	Others	63	12.2
Marital Status	Married	493	94.4
	Unmarried	29	5.6
Socio Economic Status	Upper	27	5.2
	Upper middle	20	3.8
	Middle	190	36.4
	Lower upper	197	37.7
	Lower	88	16.9
Gravid status	Primi	93	17.8
	Gravida 2	152	29.1
	Gravida 3 and above	277	53.1
Trimester	First trimester (<12 weeks)	411	78.8
	Mid trimester (12-20 weeks)	111	21.2%

Table 2: Distribution of patients according to indication of MTP.

Indications	First Trimester		Mid-Trimester		Total	
	No.	%	No.	%	No.	%
To save life of pregnant women	28	5.3	11	2.1	39	7.5
To prevent grave injury to physical and mental Health	109	20.8	3	0.5	112	23.2
Eugenic (Anomalous Fetus)	13	2.4	92	17.6	105	20.2
Humanitarian (Rape)	2	0.3	2	0.3	4	0.7
Contraceptive failure	259	49.6	3	0.5	262	50.4
Total	411	78.8	111	21.2		

Most common indication 262 (50.4%) of MTPs was contraceptive failure, out of these 259 (49.6%) MTPs were performed in first trimester. A total of 92 (17.6%) MTPs were performed (in mid-trimester) on the basis Eugenic ground i.e. due to anomalous baby.

Majority of the anomalies were anencephaly and cardiac abnormality. Only 2 (0.3%) MTPs were performed in second trimester as an indication of pregnancy caused by rape (Table 2). Though various methods are described, only four methods were used in our institution.

In first trimester, most common method employed was manual vacuum aspiration (MVA) 326 (62.5%) followed by medical method 85 (16.2%). 5 (0.9%) mid-trimester MTPs were performed by Hysterotomy and majority 106 (20.4%) mid-trimester MTPs were performed by Foley's with additional misoprostol i.e. 400mcg every 4th hourly maximum of 5doses which is our hospital protocol (Table 3).

Overall complication rate was less 143 (27.3%). Most commonly seen after medical method but were minor and

acceptable by women. Most common complication found amongst the women who underwent MTP was Gastrointestinal 51 (9.7%) related like nausea, vomiting, diarrhea and abdominal pain.

Gastrointestinal side effects were found after medical method 21 (4%) and in Foley's 26 (4.9%). Most of our patients came with anemia on admission which was treated with blood transfusion 36 (6.9%).

Women with incomplete abortion/RPOC requiring evacuation were mostly of second trimester and were very less 30 (5.7%). ICU admission was due to very severe anemia 2 (0.3%). Infection and sepsis rate after MTP was very low 9 (1.7%) in our institution (Table 4).

Table 3: Distribution of patients according to methods of MTP.

Methods	Total	
	No.	%
Medical method	85	16.2
MVA (manual vacuum aspiration)	326	62.5
Hysterotomy	5	0.9
Foley's induction	106	20.4

Table 4: Distribution of patients according to complications.

Complications	Medical		MVA		Hysterotomy		Foley's		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hemorrhage	0		2	0.3	0		2	0.3	4	0.7
Uterine perforation	0		0		0		0		0	
Injury to cervix	0		3	0.5	0		0		3	0.5
GI symptoms	21	4	2	0.3	1	0.19	26	4.9	51	9.7
Infection	0		7	1.3	0		2	0.3	9	1.7
Incomplete abortion (RPOC)	5	0.9	2	0.3	0		23	4.4	30	5.7
Failure to terminate	3	0.5	0		0		5	0.9	8	1.5
Blood transfusion									36	6.9
ICU admission									2	0.3
Total									143	27.3

DISCUSSION

As per the central health management and information (HMIS) system of national rural health mission, a total of 11.06 lakh abortions were recorded in the year of 2008-09 in India[4]. However as per WHO report published on unsafe abortion: Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008, large number of unsafe abortions reportedly take place in India, and an estimate of 200 deaths/100000 unsafe abortion occurred in south central Asia region.[5]

In this context, the present study was conducted at tertiary care center Department of Obstetrics and Gynecology, BMCRI Bangalore India to study demographic profile, methods, various indications and complications due to Medical Termination of Pregnancy performed in our institution.

In present study, maximum women who underwent MTP were 21-34 years (63.7%) and Holla R et al also showed in his study mean age of 27.96±5.41 years.[6]

There was great association between residence of women and trimester of MTP. Majority of the women 349 (66.9%) were from urban area and reported in first trimester. This is because of urban locality of this tertiary care center. Women from rural area reported late for MTP, as women from rural area have poor knowledge about medical care and MTP services. Similar observation was seen in the study of Gupta S et al where 37 (24.34%) women were from rural and remaining 115 (75.66%) women were from urban area.[7]

Out of 522 women who underwent MTPs; 493 (94.4%) were married. Similar observations were noted in the study by Sahu P et al 192 (91.4%) were married, 13(6.2%) were widow.[8] This narrowed distribution towards marital status may reflect hidden social hindrances and problems related to illegitimate children and single motherhood.

Ours hospital being Government tertiary care setup in urban locality provides free of cost service to all patients; most of the patients attending this hospital belong to the Lower Upper 197 (37.7%) and middle class 190 (36.4%) as per modified Kuppuswami's socioeconomic status scale. This was similar to observations done by Srivastava N where majority (30.48%) belonged to Lower Upper class.[9]

Most women were gravida 3 and above 277 (53.1%). This indicates now most women who want to limit family size and decrease future expenses relied on MTP services

rather than contraceptive measures. This enforces health care providers to focus on unmet need of family planning services as majority were preventable by contraceptives. These observations are consistent with the studies of B. Shivkumar C et al where majority patients 63.3% were having 1-3 deliveries followed by 22.7% women with 4-7 deliveries and only 14% cases came for termination of pregnancy without having any single delivery.[10]

In the present study, about 411 (78.8%) MTPs were performed in first trimester of pregnancy and 111 (21.2%) in mid-trimester. This implies that patient is reporting early for abortion due to increasing in rate of education. Similar observations were noted in the study by Sahu P et almajority of abortion are performed in first trimester (71.6%), 41.2% in first 2 month (8weeks) and 30.4% in 2-3 month (8 – 12 weeks).[8]

In this study, most common indication of MTP was contraceptive failure 262 (50.4%). Out of these 259 (49.6%) were from first trimester. Even though women were counseled well in both urban area and in rural areas about contraception, there is observed failures in it due to which they opt for termination. The need of the hour is to strengthen our family planning services. 105 (20.2%) MTP were performed on eugenic ground as anomalous fetus; due to detection of anomalies by level 2 USG. Only 4 (0.7%) MTP were performed on humanitarian ground as pregnancy caused by rape. These observations are consistent with the study by Gadappa et al 434 (66.8%) cases were due to contraceptive failure, out of these 307 (47%) were from first trimester and 129 (19.8%) were from mid trimester.[11]

About 326 (62.5%) MTP were performed using first trimester surgical method i.e. MVA and only 85 (16.2%) were done by medical method. Hysterotomy in 5 (0.9%) and Foley's with additional misoprostol in 106 (20.4%) women were done as mid trimester MTP method. This skewed difference between surgical and medical methods was due to reason that surgical abortion was convenient, frequent visits were avoided and patient lost to follow up was avoided. Hysterotomy rate was less as the success rate with Foley's with additional misoprostol showed a good result even in previous LSCS case also. Study done by Afsheen[12] showed that effectiveness i.e. time required for induction to delivery for misoprostol combined with Foley's catheter for termination of pregnancy was 74.8%. Observations done by A.K. Singh et al showed that suction evacuation was done in maximum cases 77.43% cases, followed by prostaglandins in 16.73%, hysterotomy in 0.8%.[13]

In present study, it was observed that the overall complication rate following MTP was less except for GI symptoms 51(9.7%) which is consistent with the observation done by Singh et al.[13]

ICU admission was very low 2 (0.3%) reason being pre-existing very severe anemia and attributed to MTP procedures. Infection and sepsis rate was very low 9 (1.7%).

CONCLUSION

Abortion despite legalization is a great neglected health care problem of women in their reproductive age-group. The religious differences are still evident in availing the MTP services and needs to be addressed tactfully. In present study gravida 3 and above were more which shows that women want fewer children than they did in the past. Though there is changing trends for medical method of termination of pregnancy but the surgical method is still favored.

Sequential use of misoprostol and Foley catheter is safe and effective in second trimester pregnancy termination for patients with or without Cesarean scars.

The primary reason of MTP is failure of contraception. Unintended pregnancy can be due to lack of knowledge, apprehension, poverty, denial, and ignorance of contraceptive use. This fact highlights the huge unmet need of contraception and counselling. It only needs measures like commitment to women's health, by providing effective contraception, by strengthening the family welfare services, improving the literacy rates, increasing the awareness of various contraceptive methods, sex education, and discouraging repeated terminations of pregnancy (surgical as well as medical) as a method of contraception.

This study being conducted in a medical college which is a tertiary level hospital and reflects only the tip of the iceberg. Large scale studies are required to assess the burden of the problem in the society.

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