

Prospective Analytical Study on Medical Termination of Pregnancy at Tertiary Care Centre in Western Rajasthan

Dr. Aakanksha Garhwal¹, Dr. Rekha Choudhary², Dr. Sajna Shyoran³

¹Resident Doctor, Department of Obstetrics and Gynaecology, Umaid Hospital, Dr. S. N. Medical College, Jodhpur (Corresponding Author)

²Professor and Unit Head, Department of Obstetrics and Gynaecology, Umaid Hospital, Dr. S. N. Medical College, Jodhpur

³Resident Doctor, Department of Obstetrics and Gynaecology, Umaid Hospital, Dr. S. N. Medical College, Jodhpur

Abstract: *Background:* Medical termination of pregnancy (MTP) is a crucial aspect of human health, medical termination of pregnancy can be done by both surgical and medical methods, MTP act amendment 2021 is not followed in India which allows to termination of pregnancy up to 24 weeks and in special circumstances pregnancy can be terminated beyond 24 weeks if medical board and court of law allows it. *Aim:* Aim of this study was to know the proportion of medical termination of pregnancy in tertiary care center and to know the socioeconomic parameters and adaptation of family planning methods and complications. *Methods:* This is a observational hospital based prospective study, in this study 79 women who wanted or advised medical termination of pregnancy among 9510 pregnant women attending our outpatient department were included in our study and their termination of pregnancy was done by either surgical (vacuum aspiration, dilatation and evacuation) or medical methods (mifepristone and misoprostol) and any complications were looked out and family planning methods were advised. *Results:* In our study 83% opted for medical termination of pregnancy and most represented age group is 25 - 29 years, making up nearly 40 % of total women, most cases were rural (53%) and illiterate (66%) and belonged to lower middle class (41%), (94%) women were married and 28% were third gravida and almost 85% women had no history of previous MTP, most common trimester of abortion was second trimester (75%) Eugenic (56%) cause was most common for seeking induced abortion and 98% women faced no complications. almost (92%) women opted for family planning methods after counselling. *Conclusions:* Such study not only shows the patterns and outcomes of MTP in a tertiary care setting but also shows the critical need for policy enhancements to support safe, informed, and accessible MTP services.

Keywords: MTP, induced abortions, vacuum aspiration, mifepristone, misoprostol

1. Introduction

Background

Medical termination of pregnancy is crucial aspect of reproductive health. This involves termination of pregnancy up to 24 weeks of gestation and in special circumstances termination can be done in term pregnancies according to MTP amendment act 2021. ^(1,2)

Aim

To know the proportion of medical termination of pregnancy, methods of induced abortions and their socioeconomic background of women seeking abortion, reason of induced abortions and adaptation of family planning services in tertiary care Centre

2. Material and Methods

This study was conducted in Umaid hospital attached to DR Sampurnand medical college, jodhpur for a time period of 4 months march 2024 to June 2024, total 79 women seeking abortion were included in this study among all pregnant women attending OPD.

Inclusion Criteria: All pregnant women seeking abortion were included in this pregnancy.

Exclusion Criteria: Women with ectopic pregnancy were excluded.

First of all, consent was taken from every woman seeking induced abortion and confidentiality was maintained throughout the study. Social parameters like age, residence, education, marital status, living children and obstetric parameters like obstetric history, trimester of pregnancy, history of previous medical termination of pregnancy, method of abortion and adaptation of family planning method were included. All women who wanted to have induced abortions were physically examined for pallor, clubbing, cyanosis, icterus, edema and systemic examination was done for CNS, CVS and respiratory system. Laboratory investigations like hemoglobin, blood grouping, liver function test, renal function test, pregnancy test and ultrasonography for location and conformation of gestational sac were done. For first trimester medical abortion tab mifepristone 200 mg was given and after 24 - 48 hours tab misoprostol 800 mcg was placed prevaginal or given sublingually ^(2, 3, 4), for surgical abortion after priming cervix with misoprostol vacuum aspiration was done, for second trimester abortions in medical methods tablet mifepristone 200 mg given and after 24 hours tab misoprostol given according to weeks of gestation sometimes mechanical method was used and intracervical foley's catheter was placed for ^(2, 5). For surgical abortion of second trimester in early second trimmest vacuum aspiration was done after cervical priming and in mid of second trimester dilatation and evacuation was done with help of ovum forceps after priming of cervix, rarely hysterotomy is also done. After abortion all women were subjected to counselling and family planning methods were advised.

Volume 13 Issue 8, August 2024

Fully Refereed | Open Access | Double Blind Peer Reviewed Journal

www.ijsr.net

3. Results

Table 1: Total percent of abortion

Number of Pregnant Women	Number of Women Seeking Induced Abortion	Percentage
9510	79	.83

This table shows the percentage of women seeking induced abortion at Umaid hospital, Jodhpur, Rajasthan

Table 2: Age group distribution

Age Group	Frequency	Percent
< 20	5	6.3
20 - 24	14	17.7
25 - 29	31	39.2
30 - 34	16	20.2
35 - 39	13	16.4
Total	79	100

The most represented age group is 25 - 29 years, making up nearly 40% of the participants

Table 3: Distribution of Religion

Religion	Frequency	Percent
Hindu	55	69.6
Muslim	24	30.4
Total	79	100

Among the participants, 69.6% were Hindu, and 30.4% were Muslim, reflects a higher proportion of Hindu participants in the study.

Table 4: Distribution of Obstetric History (OH) Categories

OH	Frequency	Percent
G1	9	11.39
G2	17	21.51
G3	22	27.8
G4	14	17.7
G5	15	19.0
G6	2	2.5
Total	79	100.0

Most participants fell under the G3 category (27.8%), which might indicate specific trends

Low abortion in high gravida may be due to unreported self - induced abortion in these women.

Table 5: Distribution of Residence

Residence	Frequency	Percent
RURAL	42	53.16
URBAN	37	46.83
Total	79	100.0

The distribution between rural (53.16%) and urban (46.83%) residents suggests a fairly balanced geographical representation, with a slight predominance of rural participants.

Table 6: Distribution of Education Status

Education Status	Frequency	Percent
Illiterate	52	65.8
Primary	14	17.7
Middle	8	10.1
Secondary education and above	5	6.3
Total	79	100.0

The educational status revealed that 65.8% of the participants were illiterate, 17.7% had completed primary education, 10.1% had reached middle school, and only 6.3% had secondary education or above, highlights a significant prevalence of illiteracy among the participants.

Table 7: Distribution of marital status -

Marital Status	Frequency	Percent
Married	74	93.7
Unmarried	5	6.3
Total	79	100.0

The marital status distribution showed that 93.7% of participants were married, and 6.3% were unmarried, indicating a predominantly married cohort.

Table 8: Distribution of History of MTP

History of MTP	Frequency	Percent
NO	67	84.8
YES	12	15.2
Total	79	100.0

Most participants (84.8%) had no history of MTP, while 15.2% had undergone MTP previously, showing a lower prevalence of prior MTPs.

Table 9: Distribution of MTP Trimester

MTP Trimester	Frequency	Percent
1	20	25.3
2	59	74.7
Total	79	100.0

Majority of MTPs occurred in the second trimester, accounting for 74.7% of the cases. Rest 25.3% of the MTPs were conducted in the first trimester

Table 10: Distribution Weeks of Gestation

Weeks	Frequency	Percent
<8 Weeks	2	2.53%
8 - 12 Weeks	18	22.78%
>12 Weeks	59	74.68%
Total	79	100

The distribution of participants based on weeks of gestation shows that the majority (59 cases, 74.68%) were in the category of >12 weeks. A smaller proportion (18 cases, 22.78%) were between 9 - 12 weeks, and only 2 cases (2.53%) were less than 8 weeks. This indicates that most MTP procedures were conducted after 12 weeks of gestation.

Table 11: Distribution of Induction to Abortion Time

Induction to Abortion Time	Frequency	Percent
<24 Hours	11	13.9
24 - 48 Hours	7	8.9
48 - 72 Hours	7	8.9
72 - 96 Hours	54	68.4
Total	79	100

The time from induction to abortion was less than 24 hours for 13.9% of participants, 24 - 48 hours for 8.9%, 48 - 72 hours for 8.9%, and 72 - 96 hours for 68.4%. This indicates that the majority of abortions occurred within 72 - 96 hours

Table 12: Distribution of Reason for Termination

Reason	Number	Percent
Eugenic	44	55.70%
Therapeutic	09	11.39%
Humanitarian	05	6.33%
Social	21	26.58%
Total	79	100

Majority (88 cases, 55.70%) were for eugenic reasons. Therapeutic reasons accounted for 9 cases (11.39%), humanitarian reasons for 5 cases (6.33%), and social reasons for 21 cases (26.58%). This distribution highlights that eugenic reasons were the most common justification for MTP

Table 13: Distribution of Age, Period of gestation, Last child Birth

Variables	N	Minimum	Maximum	Mean	Std. Deviation
AGE	79	12	39	28.43	5.9
period of gestation (in week)	79	7	23	16.41	4.1
Last Child Birth (years)	79	0	11	3.09	2.3

The age of participants ranged from 12 to 39 years, with a mean age of 28.43 years and a standard deviation of 5.9. The period of gestation reported ranged from 7 to 23 weeks, with an average gestation period of 16.41 weeks and a standard deviation of 4.1 weeks. The years since the last child birth varied from 0 to 11 years, with a mean of 3.09 years and a standard deviation of 2.3 years

Table 14: MTP trimester according to method of MTP

MTP Trimester		Method of MTP			Total	P value
		Medical	Surgical	Surgical (Hysterotomy)		
1	Count	4	16	0	20	<0.001
	Percentage	7.10%	72.70%	0.00%	25.30%	
2	Count	52	6	1	59	
	Percentage	92.90%	27.30%	100.00%	74.70%	
Total	Count	56	22	1	79	
	Percentage	100.00%	100.00%	100.00%	100.00%	

In the first trimester, 20 MTPs were performed, with 4 by medical methods, 16 by surgical methods, and none by surgical (hysterotomy). This corresponds to 7.1%, 72.7%, and 0.0% within their respective methods, representing 25.3% of the total MTPs. The second trimester 59 MTPs were performed, 52 by medical methods, 6 by surgical, and 1 by surgical (hysterotomy), totalling 74.7% of all MTPs. A statistically significant difference was noted with a p - value of <0.001, indicating a strong association for the method of MTP by trimester.

Table 15: Distribution of Adoption of Contraception After MTP

Adaptation Of Contraception After MTP	Frequency	Percent
ANTRA	29	36.7
IUCD	25	31.6
Oral Contraceptive Pills	14	17.7
Sterilization	4	5.1
Not Adopted	7	8.8
Total	79	100

Following MTP, 36.7% of participants adopted an intrauterine device (IUCD), 31.6% opted for ANTRA, 17.7% chose oral contraceptive pills (OCP), 5.1% underwent sterilization and 8.8 % did not opted any contraceptive method. This reflects a high adoption rate of IUCD and ANTRA.

4. Discussion

In this study, 83% females opted for medical termination out of total OPD patient, due to societal stigma or lack of access. Similar findings reported by Prabhalya et al. (6)(2023), having 1.2% of women opting for early first trimester terminations,

and Hsiao CH et al. (7)(2022), where the termination rate was 1.5%, suggest that cultural and systemic obstacles are significant factors, while Tailor et al. (8)(2020) observed a higher termination rate of 2.8% at a tertiary care centre, implying that better access to healthcare services could mitigate these barriers.

Most common age group for terminations in This study was 25 - 29 years, accounting for 39.2% of cases. This aligns with Melcer et al. (9)(2016) reported 37% of terminations occurred in women aged 26 - 30 years and Dural O et al. (10)(2017) having 34% of the women opting for termination were within the 25 - 29 age bracket, highlight a trend where reproductive decisions are concentrated in the late twenties.

In This study, a significant majority of the study population were Hindu (69.6%), compared to 30.4% who were Muslim. Similar cultural study by Van Wyk (11)(2013), where 65% of the study population were found to belong to the predominant local religion.

In our analysis, rural residents accounted for 53.16% and urban residents for 46.83%. This distribution is supported by findings from Dural O et al. (10)(2017), where rural study population were 55%, suggesting a slightly higher tendency of rural population to seek medical termination.

This study highlights a significant prevalence of illiteracy among study population (65.8%). This mirrors the findings of Prabhalya et al. (6)(2023), where 68% of study population seeking terminations had low educational levels. Hsiao CH et al. (7)(2022) also reported a high illiteracy rate among study population (63%).

This study showed that a large majority of study population were married (93.7%), aligning with societal norms that influence reproductive decisions, similar findings by Melcer et al. ⁽⁹⁾ (2016), where 90% of women undergoing terminations were married.

The most common category was G3 (27.8%), indicating a specific trend or issue prevalent among study population with three gestations. Prabhalya et al. ⁽⁶⁾ (2023) report a similar distribution, with the most common obstetric history being two previous pregnancies (25%).

This study indicated that 84.8% of study population had no history of medical termination of pregnancy (MTP), while 15.2% had undergone MTP previously. This trend aligns with the findings from Melcer et al. ⁽⁹⁾ (2016), where 80% of study population were first - time seekers of termination, The low rate of previous MTPs may reflect social stigma or the effectiveness of post - MTP counselling and contraceptive measures.

In this study a significant majority of terminations (74.7%) occurred in the second trimester. This aligns with the observations by Tailor et al. ⁽⁸⁾ (2020), where 70% of MTPs were performed in the second trimester. However, Hsiao CH et al. ⁽⁷⁾ (2022) noted a higher prevalence of first - trimester terminations (80%), potentially reflecting different healthcare policies or patient awareness levels regarding early termination options.

In this study, 74.68% of the MTPs occurred after 12 weeks of gestation. Similar patterns are seen in the study by Dural O et al. ⁽¹⁰⁾ (2017), which reported 72% of terminations after the first trimester. The later gestation period at termination in could reflect delays in decision - making or healthcare access, which are critical factors for policy and practice improvements.

The majority (68.4%) of abortions occurred within 72 - 96 hours post - induction. Similar findings were reported by Tailor et al. ⁽⁸⁾ (2020), with a median time of about 70 hours. However, Melcer et al. ⁽⁹⁾ (2016) noted a quicker median time of 48 hours, possibly due to differences in the medical protocols or the types of induction agents used. The extended time in this study could suggest inefficiencies or variations in practice that could be addressed to improve patient outcomes and experiences during the termination process.

This study indicates that the most common reason for medical termination of pregnancy (MTP) was eugenic, accounting for 55.70% of cases. This is consistent with the findings from Dural O et al. ⁽¹⁰⁾ (2017), where 50% of terminations were due to foetal anomalies or genetic reasons. However, in contrast, Melcer et al. ⁽⁹⁾ (2016) report a lower proportion, with only 40% of terminations being eugenic, suggesting regional or cultural differences in the reasons for seeking MTP. Hsiao CH et al. ⁽⁷⁾ (2022) reported a higher incidence of therapeutic reasons (30%) compared to our findings (11.39%), highlighting different healthcare priorities or available prenatal diagnostic technologies which might influence the categorization of reasons for termination.

In this study, complications were rare, only 1.3% of cases experiencing any issues, specifically PPH requiring blood transfusion. This very low complication rate mirrors findings from Tailor et al. ⁽⁸⁾ (2020), where the complication rate was similarly low at about 2%.

This study shows a high adoption rate of contraception post - MTP, with 36.7% choosing an intrauterine device (IUCD) and 31.6% opting for hormonal methods (ANTRA). These results align with those from Hsiao CH et al. ⁽⁷⁾ (2022), where approximately 34% adopted IUCD post - MTP. The high rate of contraception adoption in This study indicates effective post - MTP counselling and a proactive approach to preventing subsequent unwanted pregnancies.

The mean age of study population was 28.43 years, with a gestation period averaging 16.41 weeks and 3.09 years since the last childbirth. Similar result reported in Dural O et al. ⁽¹⁰⁾

In this study, majority of first trimester terminations were performed surgically (72.7%), contrasting with the predominantly medical methods used in the second trimester (92.9%) (p value <0.001). This distribution is similar to findings from Hsiao CH et al. ⁽⁷⁾ (2022), where surgical methods were more prevalent in the first trimester due to local medical practices and regulations. However, Prabhalya et al. ⁽⁶⁾ (2023) reported a higher reliance on medical methods even in the first trimester (65%), suggesting variations in practice preferences or availability of services. The significant shift towards medical methods in the second trimester observed in this study aligns with global trends towards less invasive procedures as pregnancy progresses, reflecting advancements in medical technology and changes in clinical guidelines.

5. Summary

This study tells us about proportion of medical termination of pregnancy at tertiary care centre and methods of induced abortion and family planning methods, such study shows awareness of legal services at government hospitals, absence of any complication will motivate women to seek safe and induced abortion at government hospital, such study will help the population to understand safe, legal and confidentiality of medical termination of pregnancy. The study shows the importance of socio - economic and educational factors in reproductive health decisions and emphasizes the need for comprehensive care that includes pre - and post - counselling for women undergoing MTP.

References

- [1] Arora V, Verma I. COMMENT: The Medical Termination of Pregnancy (Amendment) Act, 2021: A step towards liberation. *Indian J Med Ethics*.2021; VII (1 (NS)): 64.
- [2] World Health Organization. Abortion [Internet].2021. Available from: <https://www.who.int/news-room/fact-sheets/detail/abortion>
- [3] Creinin MD, Schreiber CA, Bednarek P, Lintu H, Wagner MS, Meyn LA, et al. Mifepristone and misoprostol administered simultaneously versus 24 hours apart for abortion: a randomized controlled trial. *Obstet Gynecol*.2007 Apr; 109 (4): 885 - 94.

- [4] Kapp N, Eckersberger E, Lavelanet A, Rodriguez MI. Medical abortion in the late first trimester: A systematic review. *Contraception*.2019 Feb; 99 (2): 77 - 86.
- [5] Shabana, Ayman & Salah, Hesham & Kandil, Mohamed & Soliman, Emad & Morsi, Dalia. (2012). Termination of mid - trimester pregnancies: misoprostol versus concurrent weighted Foley catheter and misoprostol. *F1000Research*.1.10.12688/f1000research.1 - 36.
- [6] S., Prabhalya & M., Annith & Murugesan, Umaiyal & S., Prasiddha. (2023). Outcomes of early first trimester medical termination of pregnancy: retrospective study. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*.12.2109 - 2112.10.18203/2320 - 1770. *ijrcog20231918*
- [7] Hsiao CH, Chen CH, Chang YF, Tsauer JC, Chou WS. Retrospective analysis of stillbirth and induced termination of pregnancies: Factors affecting determination. *Taiwan J Obstet Gynecol*.2022 Jul; 61 (4): 626 - 629. doi: 10.1016/j. tjog.2022.05.002. PMID: 35779911
- [8] Rastogi, Radha & Tailor, Bharat. (2020). Prospective study of complications of first trimester medical termination of pregnancy at tertiary care center. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*.9.2536.10.18203/2320 - 1770. *ijrcog20202344*.
- [9] Melcer, Yaakov & Svirsky, Ran & Vaknin, Zvi & Levinsohn - Tavor, Orna & Feldman, Noa & Maymon, Ron. (2016). Fetal abnormalities leading to termination of twin pregnancies: the 17 - year experience of a single medical center. *The Journal of Maternal - Fetal & Neonatal Medicine*.30.1 - 18.10.3109/14767058.2016.1173027.
- [10] Dural O, Yasa C, Kalelioglu IH, Can S, Yilmaz G, Corbacioglu Esmer A, Has R, Yuksel A. Comparison of perinatal outcomes of selective termination in dichorionic twin pregnancies performed at different gestational ages. *J Matern Fetal Neonatal Med*.2017 Jun; 30 (12): 1388 - 1392.
- [11] Van Wyk, Neltjie. (2013). Mokwena, RA & Van Wyk, NC 2013 Traditional healers' views on the termination of pregnancies in Mamelodi, South Africa. *Africa Journal of Nursing and Midwifery*, 15 (2): 131 - 143. *Africa Journal of Nursing and Midwifery*.15.131 - 143.