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Original Research Article

RETROSPECTIVE STUDY OF THE INDICATIONS FOR MEDICAL TERMINATION OF PREGNANCY (MTP) IN A TERTIARY CARE INSTITUTE

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ABSTRACT

Background: Medical Termination of Pregnancy (MTP) is a critical component of reproductive healthcare legally permitted under specific conditions. Understanding the trends and justifications for MTP is essential for optimizing clinical practice and ensuring legal compliance. This study aimed to evaluate the indications and socio-demographic factors associated with MTP over a three-year period at a tertiary care teaching hospital in India.

Materials and Methods: A retrospective analysis was conducted on 355 women who underwent MTP between January 2022 to December 2024. Data was collected from hospital records using a structured proforma. Variables included age, parity, area of residence, gestational age, method of MTP, indication for MTP, presence of fetal congenital anomalies, and post-MTP contraception advised. Only cases with complete records and procedures conducted within the legal framework were included. Descriptive statistics were used for analysis.

Results: Maximum women were belonging to age group of 26–30 years (37.18%), and the majority were rural residents (58.59%). Most women (88.45%) were married, and 42.54% had ≤2 children. MTPs were predominantly performed within 12 weeks of gestation (48.73%). The leading indication was contraceptive failure in married women (60.56%) followed by presence of fetal anomalies (23.66%) and pregnancies resulting from sexual assault (rape) (11.27%). Among anomaly-related terminations, syndromic disorders (3.94%), cystic hygroma (3.10%), and neural tube defects (2.82%) were most common. Post-MTP contraception predominantly included tubal ligation (44.51%) and barrier methods (40%).

Conclusion: Contraceptive failure remains the dominant indication for MTP underscoring the urgent need for robust contraceptive counselling and access, especially in rural areas.

Keywords: Medical Termination of Pregnancy, Tubal Ligation, Contraceptive Failure, Maternal health.

INTRODUCTION

Medical Termination of Pregnancy (MTP) can be defined as the deliberate and intentional termination of a viable pregnancy using pharmacological or surgical interventions under medical supervision.[1] It is a crucial aspect of reproductive healthcare and an essential component of women's rights. Access to safe, timely and legal MTP services plays an important role in ensuring women's physical and mental health. In many developing countries sociocultural stigma is attached with MTP even if it's

done for valid reasons.[2] Timely MTP which is conducted for medically and legally valid reasons is essential in optimizing both maternal as well as fetal outcomes. The window for safe termination narrows as gestation progresses, with increasing risks and complications. Unawareness about safe and legal MTP options available can push women into unsafe abortion practices. Therefore establishing clear guidelines and adhering strictly to recognized indications for MTP ensures not only patient safety but also legal protection for both the patient and the healthcare provider. Rational and timely use of MTP services also prevents the psychosocial and physiological burdens of unintended or high-risk pregnancies. It must also be emphasized that inappropriate or poorly justified use of MTP which is conducted outside the legal framework can lead to adverse health outcomes and serious medico-legal consequences.[3]

MTP is permissible under specific indications mainly when the continuation of pregnancy poses a risk to the life of the pregnant woman or may cause grave injury to her physical or mental health, when there is a substantial risk that the child, pregnancy resulting from rape or incest, and pregnancy which is a consequence of contraceptive failure, particularly in married women. As per MTP act MTP can be done on the basis of one medical practitioner's opinion up to 20 weeks of gestation and two opinions for termination between 20 to 24 weeks in specific categories such as survivors of rape or cases involving fetal anomalies. Beyond 24 weeks, terminations are allowed only after approval by a Medical Board in cases of substantial fetal anomalies.[4]

Awareness of the legal indications and safe timelines for MTP among women in the reproductive age group is a significant determinant of healthcare-seeking behavior. Inadequate knowledge regarding the legitimate grounds for MTP and the associated legal protections often drives women toward unqualified providers or unsafe methods, especially in rural or underserved areas.[5]

Despite the progressive legal reforms and increasing institutional availability of MTP services there exists a concerning gap in the understanding and documentation of MTP indications. In many tertiary care institutions detailed analysis of the reasons behind each MTP request is either inconsistently recorded or not analyzed in a structured manner. Currently, there is limited published data from tertiary care centers in India analyzing the spectrum of indications for which MTPs are being sought and granted.[6] The present cross-sectional study intends to fill this knowledge gap by systematically evaluating the indications for MTP in a tertiary care teaching hospital. By identifying prevailing trends, common justifications, and potential areas of deviation or ambiguity, this study aims to contribute evidence that can inform institutional protocols, training programs, and public health strategies aimed at strengthening safe abortion care in India.

MATERIALS AND METHODS

This was a retrospective study conducted in the Department of Obstetrics and Gynaecology of a tertiary care teaching Institute in central India. The study spanned over a 3 -year period, from January 2022 to December 2024. A total of 355 women who underwent medical termination of pregnancy (MTP) during this period were included. Data was collected retrospectively using a structured, pre-designed proforma which was filled up using medical records of the patients who had undergone MTP in this institute.

Data collection was carried out in the outpatient department (OPD) and inpatient settings, depending on the clinical management of the case. The variables recorded included age, parity, socioeconomic status, area of residence (rural or urban), and educational level, forming the socio-demographic profile. Additional information such as gestational age at the time of MTP, method used for MTP (medical or surgical), and associated obstetric or medical comorbidities was also documented.

The primary focus of the study was to analyze the indications for which MTP was sought, categorized under legally and medically accepted grounds such as contraceptive failure, socio-economic reasons, rape or sexual assault, risk to maternal physical or mental health, and fetal anomalies. The method of termination, whether patients received counselling regarding contraceptive options, and the type of contraception accepted post-MTP were also recorded and analyzed.

The process did not involve any additional intervention beyond routine data collection from medical records, hence formal ethical approval was seemed not mandatory as per prevailing guidelines.

Data were compiled and analyzed using descriptive statistical methods. The results were expressed in terms of numbers and percentage distributions to identify trends and patterns in MTP indications over the study duration.

Inclusion Criteria

1. Women who underwent medical termination of pregnancy (MTP) at the institute during the study period (January 2022–December2024).
2. Women with complete and retrievable clinical records.
3. MTPs conducted for any legally approved indication.

Exclusion Criteria

1. Cases of spontaneous abortion not requiring MTP intervention.
2. Incomplete or missing clinical records.
3. Terminations performed outside the scope of institutional documentation (e.g., referred post-procedure cases).

RESULTS

The analysis of the age distribution of the studied cases showed that the majority of women undergoing MTP were between 26–30 years (132 cases, 37.18%), followed by those in the 31–35 years age group (84 cases, 23.66%) and 21–25 years (66 cases, 18.59%). Fewer cases were seen in the age groups up to 20 years (36 cases, 10.14%) and 36–40 years (35 cases, 9.86%), with the least number above 40 years (2 cases, 0.56%). The mean age of cases was found to be 28.41 +/- 5.41 years (Figure 1).

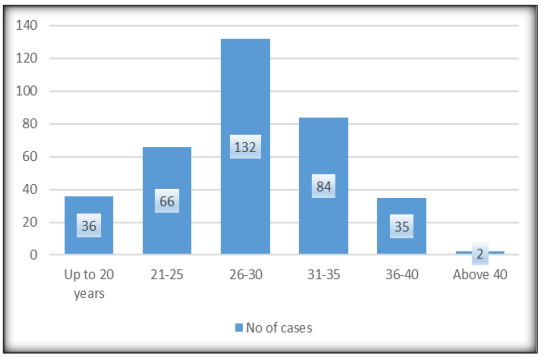

Figure 1: Age Distribution of studied cases

Regarding the area of residence, the majority of MTP seekers belonged to rural areas (208 cases, 58.59%), while urban residents comprised 147 cases (41.41%). The religious distribution of the participants showed that most women were Hindu (273 cases, 76.90%), followed by Muslim women (81 cases, 22.82%), and only one case (0.28%) belonged to the Christian community. With respect to marital status, most of the women who underwent MTP were married (314 cases, 88.45%), while unmarried women constituted 41 cases (11.55%) (Table 1).

The analysis of the parity status revealed that most women had two or fewer children (151 cases, 42.54%), followed by those with 3–4 children (135 cases, 38.03%), while 69 cases (19.44%) had more than four children (Table 2).

The analysis of gestational age at the time of MTP indicated that most terminations were done up to 12 weeks of gestation (173 cases, 48.73%), followed by the groups of 17–20 weeks (69 cases, 19.44%), 12–16 weeks (58 cases, 16.34%), and 20–24 weeks (55 cases, 15.49%) (Table 3).

Looking into the indications for MTP, the most common reason was failure of contraception in married women (215 cases, 60.56%), followed by substantial risk of severe fetal abnormalities (84 cases, 23.66%), and pregnancy caused by sexual assault(rape) (40 cases, 11.27%). Other reasons included prevention of grave physical/mental injury (14 cases, 3.94%) and saving the life of the woman (2 cases, 0.56%) (Figure 2).

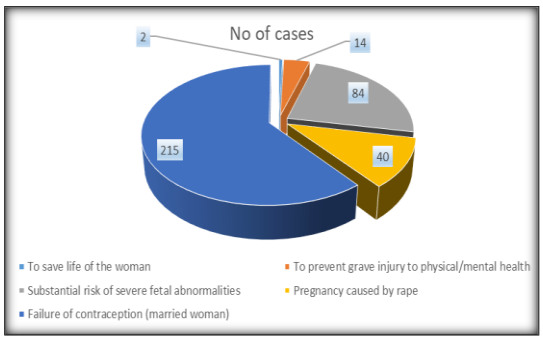

Figure 2: Indications for MTP in studied cases.

Further analysis of specific fetal anomalies in MTP cases showed that the majority (271 cases, 76.34%) there were cases without anomalies. Among those with anomalies, the most commonly reported conditions were syndromic abnormalities such as Downs syndrome, Turner syndromes(tested high risk on screening test and supported by sonographic finding), VACTERL association, Meckel-Gruber syndrome, and multiple anomalies(14 cases, 3.94%), cystic hygroma and renal anomalies including Potter's syndrome (11 cases each, 3.10%), neural tube defects excluding anencephaly (10 cases, 2.82%), complex congenital heart diseases and other anomalies (9 cases each, 2.54%), and anencephaly (8 cases, 2.25%) (Table 5).

In terms of contraceptive methods advised post-MTP, tubal ligation was the most frequently recommended method (158 cases, 44.51%), followed by barrier methods (142 cases, 40.00%) and intrauterine devices like Copper-T (50 cases, 14.08%). A smaller number were advised DMPA injections (5 cases, 1.41%) (Table 6).

Table 1: Area of residence, religion and Marital status of studied cases

	Area Type	No of cases	Percentage
Area Of Residence	Rural	208	58.59%
	Urban	147	41.41%
	Total	355	100.00%
Religion	Hindu	273	76.90%
	Muslim	81	22.82%
	Christian	1	0.28%
	Total	355	100.00%
Marital Status	Married	314	88.45%
	Unmarried	41	11.55%
	Total	355	100.00%

Table 2: Parity of studied Cases

Parity	No of cases	Percentage
Less than or equal to 2	151	42.54%
3-4	135	38.03%
Above 4	69	19.44%
Total	355	100.00%

Table 3: Gestational age at the time of MTP

Gestational Age	No of cases	Percentage
Up to 12 weeks	173	48.73%
12–16 weeks	58	16.34%
17–20 weeks	69	19.44%
20–24 weeks	55	15.49%
Total	355	100.00%

Table 5: Fetal anomalies in studied cases

Indication for MTP	No of cases	Percentage
No anomalies	271	76.34%
Anencephaly	8	2.25%
Corpus Collasum Agenesis	5	1.41%
Cystic Hygroma	11	3.10%
Neural Tube Defects (Other than Anencephaly)	10	2.82%
Complex congenital Heart Diseases	9	2.54%
Renal anomalies including potters syndrome	11	3.10%
Haemoglobinopathies	6	1.69%
Conjoint Twins	1	0.28%
Syndromes (Downs Turner, VACTERAL and Meckel-Gruber syndrome, multiple anomaliesetc)	14	3.94%
Other Anomalies	9	2.54%
Total	355	100.00%

Table 6: Contraceptive method advised post MTP

Contraceptive Method Advised	No of cases	Percentage
TL (Tubal Ligation)	158	44.51%
Barrier	142	40.00%
CUT (Copper-T / IUD)	50	14.08%
DMPA (Injectable Contraceptive)	5	1.41%
Total	355	100.00%

DISCUSSION

In this retrospective analysis of indications for MTP, we have examined the spectrum of indications for Medical Termination of Pregnancy (MTP) in a tertiary care institution over a period of three-year. This study also analysed demographic characteristics and clinical justifications for undertaking MTP. Our findings indicate contraceptive failure among married women as the predominant indication, accounting for approximately 60.56% of cases, consistent with the socio-cultural context and reproductive health infrastructure in India. This aligns closely with the study conducted by Katke et al who reported contraception failure in married women as the leading cause for seeking MTP (90.17%) in their tertiary care-based study.[12] Similarly Umashanker et al also reported similar trend and found that contraceptive failure as a caused of MTP in approximately 44.7 % of their cohort. Contraceptive failure as one of the leading causes of MTP underscores the necessity for proper counselling and educating couples in Indian settings.[13]

Amongst the studied cases the majority of procedures were conducted within the first trimester (up to 12 weeks) which accounted for 48.73% of cases. This timing is similar to the findings reported by Agarwal P et al who found that first-trimester MTP constituted approximately 48.9 % of their study cohort.[14] However, our data reveal a relatively higher percentage (14.93%) of second-trimester terminations (20–24 weeks) indicating a notable delay in seeking medical intervention. Nimonkar S similarly reported an elevated frequency of second-trimester terminations attributing delays to inadequate awareness of pregnancy signs, lack of timely access to healthcare facilities and stigma around abortion particularly in developing countries including India.[15]

Socio-demographic factors profoundly influenced MTP-seeking behavior in our study population. A substantial proportion (58.59%) were rural residents, aligning with studies conducted by Kulshrestha K et al which highlighted significant disparities in rural versus urban access to availability of contraceptive and ignorance about proper use of such contraceptive methods.[16] The authors reportedthat out of total 150 women undergoing MTP for various reasons maximum number of cases (56.7%) were from 18-25 year age group and 102 (68%) cases were from rural origin. Improper use of contraceptives or nonavailability of contraceptive services could be reasons for such a higher percentage of women

coming for MTP from rural areas. Similarly, Chhabra S reported increased utilization of MTP services among rural women in their tertiary care analysis, pointing to underlying gaps in rural healthcare infrastructure and contraceptive access. One of the dangerous trends as reported by Chhabra S et al was that 72 % of the unmarried women and 43%of the married women seeking MTP were in their second trimester pointing towards hesitation and delay in taking a decision regarding termination of pregnancy.[17] This could either be due to ignorance of early signs of pregnancy or due to cultural stigma attached to medical termination of pregnancy.

Substantial fetal anomalies constituted 23.66% of MTP indications, significantly influencing clinical decision-making processes. Syndromic abnormalitiesnotably Downs syndrome, Turner syndromes, VACTERL association, Meckel-Gruber syndrome and multiple anomalies, accounted for the largest proportion of anomaly-based terminations (3.94%). Comparable data from Sankalpa AJ et al demonstrated a similar incidence, with fetal anomalies to be indication of MTP in 33.3% cases.[18] In a similar study Suriyanarayanan G et al reported craniospinal and musculoskeletal anomalies to be common indications for MTP.[19] The similarity of these findings indicates the continuing necessity for effective prenatal screening programs and timely diagnosis. Early diagnosis of fetal anomalies and termination of pregnancy at an early stage will reduce maternal risks and psychological trauma associated with advanced gestational interventions.

Regarding post-MTP contraception counselling, our results indicated a strong preference for permanent methods specifically tubal ligation (44.51%). This reflects socio-cultural norms and possibly the reluctance to rely on reversible methods due to previous contraceptive failures. This trend parallels observations by Kumari R who noted a preference for contraceptive methods such as tubectomy, intrauterine contraceptive devices and DMPA injectables.[20] Couples with prior unintended pregnancies and inadequate trust in temporary contraceptive methods are most likely to opt for permanent sterilisation methods if proper counselling is done post-MTP.

CONCLUSION

Contraceptive failure remains the dominant indication for medical termination of pregnancy, underscoring the urgent need for robust contraceptive counselling and access, especially in rural areas. A significant proportion of second-trimester terminations due to delayed presentation highlights persistent gaps in awareness and access. Improved prenatal screening and timely interventions are necessary to manage fetal anomalies and reduce maternal morbidity.

Conflict of Interest: None.

REFERENCES

1. Koringa HT, Joshi KJ, MehtaJP. A study of sociodemographic determinants, reasons and decision maker of medical termination of pregnancy in urban slums of Jamnagar, India.Int J Res Med Sci2015;3(8):1964-8.
2. Makleff S, Wilkins R, Wachsmann H, Gupta D, Wachira M, Bunde W, Radhakrishnan U, Cislaghi B, Baum SE. Exploring stigma and social norms in women's abortion experiences and their expectations of care. Sex Reprod Health Matters. 2019 Nov;27(3):1661753. doi: 10.1080/26410397.2019.1661753.
3. Pai SN, Chandra KS. Medical Termination of Pregnancy Act of India: Treading the Path between Practical and Ethical Reproductive Justice. Indian J Community Med. 2023 Jul-Aug;48(4):510-513. doi: 10.4103/ijcm.ijcm_540_22.
4. Datar N. MTP After 20 weeks: When & How? J Obstet Gynaecol India. 2021 Aug;71(4):357-360. doi: 10.1007/s13224-021-01475-0. Epub 2021 Jul 31.
5. Pal R, Gupta PK, Tyagi S, Palariya H, Vora V, Agarwal P. Determinants of Unsupervised Medical Termination of Pregnancy Pill Usage Among Women: A Cross-Sectional Study from North India. Cureus. 2023 Nov 24;15(11):e49321. doi: 10.7759/cureus.49321.
6. Jain M. A survey of indications of MTP and concurrent contraceptive practices in a tertiary care institute. Int J Reprod Contracept Obstet Gynecol 2014; 3:1073-5.
7. KatkeRD, PrabhudesaiAA.Socio-epidemiological factors of medical termination of pregnancy: an overview in a tertiary care institute. Int J Res Med Sci2016; 4:1061-4.
8. Umashankar KM, Dharmavijaya MN, et al. Survey of the attitude to, the knowledge and the practice of contraception and medical abortion in women who attended a family planning clinic. Clin Diagn Res 2013;7(3):493–495.
9. Agarwal P, Dasari P. Clinical profile of women seeking medical termination of pregnancy at a tertiary care institute, South India. Int J Reprod Contracept Obstet Gynecol 2021; 10:1580-6.
10. Nimonkar S, Chaudhari P, Gupta V, Saxena N, Agarwal S.Factors associated with induced second trimester abortion at a tertiary level hospital of Uttarakhand region: a 6-year retrospective study.Int J Reprod Contracept Obstet Gynecol2020;9:2333-6.
11. Ram F, Shekhar C, Chowdhury B. Use of traditional contraceptive methods in India & its socio-demographic determinants. Indian J Med Res. 2014 Nov;140 Suppl(Suppl 1):S17-28. PMID: 25673538; PMCID: PMC4345748.
12. Chhabra S, Gupte N, Mehta A, Shende A. Medical termination of pregnancy and concurrent contraceptive adoption in rural India. Stud Fam Plann. 1988 Jul-Aug;19(4):244-7. PMID: 3176097.
13. Sankalpa AJ, Jayanthy T, Sanvithi A.A retrospectivestudy on various methods used in second trimesterMTP at KIMS hospital and research centre, Bangalore. Int J ReprodContracept Obstet Gynecol 2022; 11:2208-12.
14. Suriyanarayanan G, Kandasamy V, RamachandranAC.A retrospective analysis of mid trimester termination of pregnancies for fetal congenital malformations at tertiary care hospital. Int J ReprodContracept Obstet Gynecol 2021; 10:4254-7.
15. Kumari R. Acceptance of post-abortion contraception following unsupervised intake of abortion pills at tertiary care teaching institute: an eye opener. Int J Reprod Contracept Obstet Gynecol 2024; 13:1478-81.