

FROM CHOICES TO CONSEQUENCES: UNDERSTANDING FIRST-TRIMESTER ABORTIONS IN A TERTIARY SETTING- AN OBSERVATIONAL STUDY

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Abstract

Background: Abortion, particularly in the first trimester, is a significant public health issue with complex medical implications. This study aims to analyze the characteristics, types, and outcomes of first-trimester abortions among women attending a tertiary care hospital in Jabalpur, India, while highlighting the impact of unsafe abortion practices and the need for improved access to safe services. **Materials and Methods:** An observational study was conducted over 18 months, involving 260 women who attended the Obstetrics and Gynaecology department at NSCB Medical College. Data were collected using a structured questionnaire to assess types of abortions, contraceptive practices, and associated complications. Statistical analyses were performed using SPSS version 24. **Result:** A total of 260 women experiencing first-trimester abortions were included in the study. Spontaneous abortions were more common (66.5%) than induced abortions (33.5%). Incomplete abortions dominated spontaneous cases (52.6%), while a troubling 79.3% of induced abortions were self-managed with over-the-counter medication, without medical supervision. Only 20.6% of women with induced abortions sought hospital-based care. A significant proportion (78.2%) of women who had induced abortions relied on natural contraceptive methods, which are associated with high failure rates. Complications were most pronounced in women with incomplete and self-managed abortions. These included the need for blood transfusions, ICU admissions, ventilatory support, septic abortion, and mortality. The most severe complications were overwhelmingly associated with self-managed abortions using over-the-counter medications, underscoring the public health risks of unsupervised abortion. **Conclusion:** This study highlights the alarming prevalence of self-managed abortions and the substantial health risks associated with unsafe abortion practices. The high complication rates observed in incomplete and induced abortions point to the urgent need for public health interventions focused on improving access to safe, medically supervised abortion services and effective contraception. **Clinical Significance:** The findings underline the critical importance of enhancing access to safe abortion services, improving contraceptive counselling, and raising awareness about the dangers of unsupervised abortions. Addressing these issues through targeted healthcare interventions can significantly reduce the risks associated with unsafe abortions.

INTRODUCTION

First-trimester abortion remains a critical public health concern, marked by significant medical and socio-demographic complexities. According to the

World Health Organization (WHO), approximately 73 million induced abortions occur worldwide each year, nearly 45% of which are unsafe. These unsafe procedures result in serious complications such as hemorrhage, infection, and incomplete abortion,

leading to around 7 million hospital admissions annually. The burden of unsafe abortion disproportionately affects low- and middle-income countries, where restricted access to safe abortion services directly contributes to heightened maternal mortality and morbidity.^[1]

In India, despite the enactment of the Medical Termination of Pregnancy (MTP) Act in 1971 to legalize and ensure safe abortion practices, a significant portion of abortions still take place outside regulated medical environments. The WHO estimates that South Asia, including India, experiences approximately 3.4 million unsafe abortions every year. Socio-cultural stigmas, inadequate awareness, and limited healthcare infrastructure, especially in rural areas, create barriers to safe abortion access, pushing many women towards self-managed abortions through over-the-counter medications without proper medical oversight.^[1]

The consequences of unsafe and self-managed abortions are dire. These methods are often associated with life-threatening complications such as incomplete abortion, severe hemorrhage, septic abortion, and mortality. The misuse of over-the-counter abortifacients, particularly without medical guidance, further exacerbates these risks. Women who undergo incomplete or unsafe abortions frequently require emergency interventions, such as blood transfusions, intensive care unit (ICU) admissions, and, in severe cases, ventilatory support to manage life-threatening conditions.

This study seeks to explore the outcomes and complications associated with first-trimester abortions, with an emphasis on the dangers of self-managed abortions and unsafe practices. By analyzing the associated risks, this research aims to underscore the urgent need for improved access to safe abortion services, comprehensive reproductive health education, and stronger healthcare policies to mitigate the incidence of unsafe abortions and enhance maternal health outcomes in India.

MATERIALS AND METHODS

This observational study was conducted over 18 months, from August 1, 2022, to January 30, 2024, at the Department of Obstetrics & Gynaecology, NSCB Medical College, Jabalpur. The study included only patients willing to participate, selecting cases from both the outpatient department (OPD) and admissions.

This study included women up to 12 weeks of gestation reporting to the OPD and emergency. A

questionnaire-based proforma collected detailed data on their knowledge, attitude, and practices regarding abortion types, safety, and history of any abortion methods. Patients seeking medical termination of pregnancy or presenting with incomplete abortions received appropriate treatment.

Inclusion Criteria

Patients up to 12 weeks of gestation reporting to the OPD with diagnosed or newly diagnosed abortions.

Exclusion Criteria

Patients presenting after 12 weeks of gestation and those unwilling to participate.

Sample Size and Technique: The study included 260 patients, selected via simple random sampling over 18 months. The sample size calculation used the formula $n = z^2 \times p(1-p) / l^2$ where n is required sample size. $z = 1.96$ at 95% Confidence limit, 5% alpha and 80% power (1-beta) $p = 0.371$ (assumed probability) $l =$ Precision (marginal error) which was considered 25% relative to the assumed probability (0.9275) resulting in a sample size of 242. Data were entered into Microsoft Excel and analysed using SPSS version 24.

RESULTS

Of the 260 cases included in the study, a striking pattern emerged—66.5% of the women had experienced spontaneous abortions, while 33.5% had undergone induced abortions. What stood out most in the induced cases was the alarming reliance on self-management, with 79.3% of women turning to over-the-counter pills without medical supervision, leaving only 20.6% who opted for hospital-based care. This contrast between those seeking proper medical attention and those venturing into unsafe practices set the tone for the outcomes.

The root cause of these adverse outcomes could be traced back to inadequate contraceptive use. As shown in Table 1, a striking 78.2% of women who sought induced abortions had relied on natural methods such as coitus interruptus or lactational amenorrhea, leading to unintended pregnancies and, ultimately, unsafe abortion practices that could have been avoided. In contrast, only 16.1% had used intrauterine devices (IUCDs), and smaller percentages reported using oral contraceptive pills (2.3%) or injectable contraceptives (3.5%). The association between poor contraceptive choices and induced abortions was highly significant (p-value = 0.000).

Table 1: Pre-Conception Contraception Usage in cases of induced abortions (n=87).

Pre-Conception Contraception	Frequency	Percent (%)	P-Value
Natural Methods	68	78.2	0.000
Inj. DMPA	3	3.5	0.000
OCPs	2	2.3	0.000
IUCD	14	16.1	0.000
Total	87	100.0	-

This table illustrates the prevalence of different contraceptive methods used by women who had induced abortions. Natural methods were the most common, with a significant association between contraceptive use and induced abortion outcomes ($p = 0.000$).

In terms of reasons for seeking induced abortions, Table 2 reveals that 71.2% of the women cited

unplanned or unwanted pregnancies. Contraceptive failure was reported by 12.64%, while financial and medical reasons accounted for 11.4% and 4.5%, respectively. Statistical analysis showed a significant correlation between these reasons and the number of abortion cases (p -value = 0.002).

Table 2: Distribution of cases according to reasons for seeking abortions [n=87]

Reason For Seeking Abortion	Frequency	Percent (%)
Not planned/unwanted	62	71.20%
Contraceptive failure	11	12.64%
Medical reasons	4	4.50%
Financial reasons	10	11.40%
Total	87	100.00%

This table categorizes the reasons for seeking induced abortions. The majority of cases were due to unplanned or unwanted pregnancies, with a statistically significant association ($p = 0.002$).

The consequences of these decisions were evident. Among women with missed abortions, 3% were managed solely with medical treatments, while the majority (63.3%) required manual vacuum aspiration (MVA) alone. A smaller portion (33.3%) needed both cervical priming and MVA. Fortunately, despite a few cases requiring blood transfusions due to pre-existing anaemia, most were managed smoothly without significant complications.

In the inevitable abortion cases, the pregnancies expelled naturally, requiring little intervention.

Meanwhile, threatened abortions offered a more varied outcome. While nine women received supportive care, two ultimately faced incomplete abortions, needing MVA, and only one continued the pregnancy to term.

It was in the incomplete abortions that the real risks became evident. Most women (94%) needed surgical intervention with MVA. Complications mounted, with 12.4% requiring blood transfusions, and severe cases leading to ICU admissions (7.84%) and even ventilatory support (3.26%). Shockingly, septic abortions affected five women, leading to four tragic deaths.

Table 3: Distribution of cases according to complications in induced abortions [n=87]

Complications	Self-Medication (n=69)	Hospital Setting (n=18)	Total (n=87)
ICU Admissions	5	0	5
Deaths	2	0	2
Multiple Blood Transfusions	7	0	7
Septic Abortions	4	0	4
Total Complications	18	0	18

This table represents the comparison of complications among patients who underwent induced abortions either through self-medication or in a hospital setting. The Chi-Square test results demonstrate a statistically significant difference between the two groups, with a p -value < 0.001 .

The induced abortions told their own grim story. Of those who self-medicated, 7.24% ended up in intensive care, 2.89% died, and 10.14% needed repeated transfusions. Septic abortions, a consequence of unsafe practices, claimed even more lives. In contrast, institutional abortions saw no such life-threatening complications, further emphasizing the sharp difference between safe and unsafe practices.

DISCUSSION

The study's findings highlight the significant complications arising from unsafe and self-managed abortions, especially compared to cases managed in a

clinical setting. The majority of missed abortions were successfully treated, with only a few requiring blood transfusions. However, in cases of incomplete abortions, there was a notably higher rate of complications, including the need for ICU admission and ventilatory support. This aligns with the global understanding that incomplete abortions, when inadequately managed, lead to more severe outcomes, such as sepsis and maternal mortality.^[2] Self-medicated induced abortions were particularly dangerous, with a substantial percentage of these women experiencing severe complications like septic abortion, requiring ICU care and, tragically, resulting in deaths. In contrast, none of the women who sought institutional care for induced abortions faced life-threatening complications, underscoring the importance of safe abortion services.

In the present study, 78.2% of women seeking induced abortions primarily utilized natural contraceptive methods, such as coitus interruptus and the calendar method, revealing a critical lack of

effective contraception. This contrasts with findings from other research, where 24% of women reported recent use of barrier methods and 28% used oral contraceptives.^[3] Additionally, another study indicated that only 41.3% of women seeking induced abortions had used any form of contraception in the six months prior to conception, significantly below the national target of 55% contraceptive utilization.^[4] When comparing these results to other studies, similar trends are evident, with higher morbidity and mortality linked to self-managed or unsupervised abortions.^[5] Global data from the WHO confirms that unsafe abortions remain a major health crisis, especially in developing countries, contributing to maternal morbidity and mortality.^[6] This study reinforces the need for enhanced access to reproductive health services, education on contraception, and safe abortion practices to reduce the burden of complications and maternal deaths. It also underlines the fact that hospital-based management of abortions is not only safer but crucial for preventing severe health risks associated with incomplete or unsafe abortion attempts.

CONCLUSION

This study sheds light on the pressing issue of first-trimester abortions, revealing critical insights into the types and management outcomes associated with both spontaneous and induced cases. Notably, the high prevalence of self-medicated abortions highlights a serious public health concern, as many women resort to over-the-counter pills without professional guidance. The findings indicate that these unsafe practices often lead to severe complications, including septic abortions and maternal mortality. Furthermore, the alarming rates of unintended pregnancies emphasize the urgent need

for effective contraceptive counselling and accessible reproductive health services.

Clinical significance: The study underscores the necessity for healthcare systems to address the gaps in abortion care, particularly concerning the complications arising from self-managed abortions. By improving access to safe abortion services and enhancing education on contraceptive methods, the health risks faced by women can be significantly mitigated. Furthermore, this research highlights the importance of integrating comprehensive maternal healthcare within primary care settings to ensure women receive timely and appropriate interventions, ultimately reducing the incidence of unsafe abortions and improving maternal health outcomes in the region.

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