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***Original Research Article***

# Complications Associated With Termination of Pregnancy

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**Abstract:** *Termination of pregnancy is a commonly performed obstetric procedure, but it may be associated with maternal complications, particularly when performed in later gestational ages.* ***Objective:*** *To assess the complications related to the termination of pregnancy.* ***Methods:*** *A cross-sectional study was conducted from 15-September 2024 to 15-March 2025 at the Department of Obstetrics and Gynecology, Lady Reading Hospital, Peshawar. Eighty-eight patients presenting for termination of pregnancy were selected. We observed the complications following the termination procedure.* ***Results:*** *Mean age was 32.59±4.40 years. Complications-wise, bleeding was seen in 19 (21.6%) patients, infection in 12 (13.6%) patients, D&C was repeated in 5 (5.7%) patients, and transfusion was required in 3 (3.4%) patients. Bleeding was notably higher in patients in the second trimester (P = 0.05). Repetition of D&C, infection, and transfusion were higher in patients in the second trimester, but the association was not notable.* ***Conclusion:*** *We conclude that the complications following termination of pregnancy in our study were bleeding followed by infection, repeated D&C, and the need for transfusion. Patients in the second trimester are more likely to develop complications post-procedure of termination.*

**Keywords:** Termination of pregnancy, Complications, Pregnancy

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## Introduction

An advantage of first-trimester screening is the prompt identification of fetal abnormalities (1, 2). In low-risk pregnancies, the rate of detecting severe fetal malformations was 46%, but in the high-risk population, it was 61%. Comparable findings were observed in screening for heart abnormalities during the first trimester (3). The growing accessibility of cell-free DNA screening for trisomy 21 has brought up alternative models of pregnancy care that question the necessity of a comprehensive first-trimester scan. The notion currently receiving the most attention involves analyzing cell-free DNA during or even before the 10th week of pregnancy, along with a simple first-trimester ultrasound examination (4). The majority of healthcare experts advocating for this strategy contend that the expense of conducting two abnormality scans every pregnancy is exorbitant, especially considering that significant abnormalities can typically be detected during the second trimester (5, 6). According to their reasoning, the gestational age at the time of diagnosing the fetal anomaly has little significance, as all possible courses of action, including termination of pregnancy, are accessible at any point during the entire duration of the pregnancy in many countries (7).

The effectiveness of this method may be compromised if it is demonstrated that the likelihood of complications related to the termination of pregnancy rises as the pregnancy progresses. Regrettably, there is a limited number of studies that specifically examine the morbidity and mortality linked to terminations. A study analyzed the mortality rate associated with legal terminations; the authors documented a maternal mortality rate of 0.7 per 100,000 terminations (8). The mortality risk exhibited exponential growth, with a 38% increase for every additional week of gestation (8). When comparing women who had their pregnancies terminated at or before 8 weeks of gestation with women who had their terminations performed in the second trimester, it was shown that the latter group had a considerably higher likelihood of dying from reasons connected to the termination of pregnancy (9, 10). A study investigated the health problems related to terminations conducted between 13 and 24 weeks of pregnancy, either through labour induction or dilatation and evacuation. The study found that 24% of women who had induction and 3% of those who had dilatation and evacuation experienced at least one complication (11, 12). These complications included fever that required antibiotics, injury to the uterus or cervix that needed surgical repair, hospital admission or readmission, retained tissue that necessary evacuation and dilatation or manual removal of the placenta, failure to terminate the pregnancy using the primary method, or a visit to the emergency department after the procedure (13, 14).

Abortion, also referred to as the cessation of pregnancy, is an intricate and delicate medical process that intentionally concludes a pregnancy. Although medical improvements have enhanced the safety of abortion, unforeseen problems still exist. Abortion is a medical operation that, like any other, carries possible hazards. To comprehend and address these complexities, it is necessary to adopt a comprehensive strategy that encompasses competent healthcare practitioners, empathetic counselling, and the availability of secure and lawful resources. In the midst of grappling with the intricacies of reproductive rights and healthcare, it is crucial to give utmost importance to the welfare of women and ensure that they have access to the essential resources required for making safe and knowledgeable choices regarding abortion. The rationale of this study is to determine the complications associated with the termination of pregnancy.

## Methodology

We initiated this cross-sectional study from 15-September 2024 to 15-March 2025 at the Department of Obstetrics and Gynecology, Lady Reading Hospital, Peshawar, after obtaining ethical approval from the hospital. Patients aged> 18 years were selected with gestational age < 28 weeks, having a singleton pregnancy, and presenting for termination of pregnancy. We accessed the files of these patients from our ward's records. All the procedures, such as administration of abortifacient medicines, D&C, and laparotomy, were performed by a consultant gynecologist having more than 10 years of experience. Complications such as bleeding, need for transfusion, infection, and repetition of D&C were noted down on a pre-designed pro-forma. Patients were admitted for blood transfusion if they had lost more than 500 ml of blood.

The sample size for our study was selected using the OpenEPI calculator, with a previous infection frequency of 3.8% (14), a margin of error of 4%, and a confidence interval of 95%. The calculated sample size was 88; patients were selected via a non-probability, consecutive sampling technique. Data analysis was carried out using SPSS ver 24. The Chi-Square test was used to assess association, with a significance level of $P < 0.05$.

## Results

The mean age of our patients was 32.59±4.40 years, and the mean gestational age was 16.81±5.51 weeks. A previous caesarean section was performed in 17 (19.3%) patients, while 45 (51.1%) patients were multipara. The methods of TOP performed in our study were dilation and curettage (46 [52.3%] patients), laparotomy (8 [9.1%] patients), and abortifacient medicines (34 [38.6%] patients). Regarding the complications of TOP found in our study, bleeding was observed in 19 (21.6%) patients, infection was diagnosed in 12 (13.6%) patients, D&C was repeated in 5 (5.7%) patients, and transfusion was required in 3 (3.4%) patients (Table 1). We found that bleeding was notably higher in patients in their second trimester. Other complications, such as D&C repetition, infection, and transfusion, were more common in patients presenting in the second trimester than in those presenting in the first trimester; however, the association was not significant (Table 2).

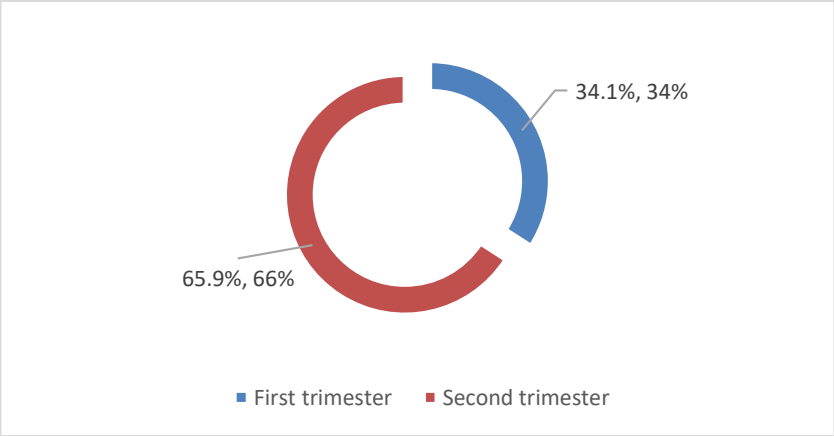


**Figure 1: Trimester-wise distribution**

**Table 1: Complications of TOP**

| Complications of TOP | | N | % |
|---|---|---|---|
| D&C repeated | Yes | 5 | 5.7% |
| | No | 83 | 94.3% |
| Infection | Yes | 12 | 13.6% |
| | No | 76 | 86.4% |
| Transfusion required | Yes | 3 | 3.4% |
| | No | 85 | 96.6% |
| Bleeding | Yes | 19 | 21.6% |
| | No | 69 | 78.4% |

**Table 2: Association of complications with trimester**

| Complications of TOP | | Trimester | | | | P value |
|---|---|---|---|---|---|---|
| | | First trimester | | Second trimester | | |
| | | N | % | N | % | |
| D&C repeated | Yes | 1 | 20.0% | 4 | 80.0% | 0.49 |
| | No | 29 | 34.9% | 54 | 65.1% | |
| Infection | Yes | 2 | 16.7% | 10 | 83.3% | 0.17 |
| | No | 28 | 36.8% | 48 | 63.2% | |
| Transfusion required | Yes | 0 | 0.0% | 3 | 100.0% | 0.20 |
| | No | 30 | 35.3% | 55 | 64.7% | |
| Bleeding | Yes | 3 | 15.8% | 16 | 84.2% | 0.05 |
| | No | 27 | 39.1% | 42 | 60.9% | |

## Discussion

Techniques for abortion and methods of birth control have been described over the course of history. At present, several nations do not impose any restrictions on abortion; nevertheless, the majority of these nations have a maximum gestational age restriction for when abortions can be performed, which ranges from six to twenty-four weeks. Abortions have been completely prohibited in several countries around the world. (15) The World Health Organization (WHO) categorizes abortions as either "safe" or "unsafe" for the mother. "Safe" abortions are those that are carried out in an environment whose abortion laws are not restrictive, even if there is a legal requirement; safe abortions are still possible. An abortion is considered to be "unsafe" when it is carried out by an individual who lacks the necessary skills, when it is carried out using potentially harmful materials and methods, or when it is carried out in an atmosphere where the minimum medical requirements are not followed.(16)

Women who live in areas where abortion is severely restricted by law or in nations where, even if it is allowed, safe abortion is not readily available are put in danger by unsafe abortions, which constitute a pandemic that may be prevented. (17) Within this context, women who are experiencing an unplanned pregnancy frequently resort to self-inducing abortions or obtaining abortions in secret from medical professionals, paramedical staff members, or traditional healers. As a result of the possible dangers and problems that are connected with abortions, particularly unsafe abortions, emergency doctors are required to be able to identify and address these issues within the context of the emergency department (ED). (18)

We conducted our research on 88 patients presenting for termination of their pregnancy. The mean age of our subjects recorded was 32.59±4.40 years, while their mean gestational age was 16.81±5.51 weeks. We observed that patients presenting in their second trimester were more frequent than those presenting in their first trimester. A similar observation has been reported in a local study, which found that most of their patients presenting for TOP were in the second trimester. (19)

D&C was performed in 47 (53.4%) patients, laparotomy in 7 (8%) patients, and abortifacient medicines were given to 34 (38.6%) patients. The aforementioned local study also reported a similar pattern of methods of TOP in their patients; they reported that most of their subjects presenting for TOP underwent D&C followed by abortifacient medicines. (19)

Regarding complications, more patients had bleeding (19; 21.6%), infection was observed in 12 (13.6%) patients, D&C was repeated in 5 (5.7%) patients, and blood transfusion was required in 3 (3.4%) patients. Stratification revealed that the frequency of complications was higher in patients presenting in the second trimester; however, apart from bleeding, we did not find a notable association between complications and trimester, which may be due to our small sample size. In agreement with our findings, a study reported that bleeding frequency was higher than other complications, followed by infection. They also reported a notable association between trimester and complications, largely due to their larger sample. They noted that patients in the second trimester had notably higher complication rates. (20)

## Conclusion

In our research, we came to the conclusion that the challenges that occurred when a pregnancy was terminated were bleeding, which was then followed by infection, repeated D&C, and the requirement for a transfusion. Patients who are in their second trimester are at a greater risk of experiencing complications following the termination of their pregnancy.

## Declarations

**Data Availability statement**
All data generated or analysed during the study are included in the manuscript.

**Ethics approval and consent to participate**
Approved by the department concerned. (602/LRH/MTI)

**Consent for publication**
Approved

**Funding**
Not applicable

## Conflict of interest

The authors declared no conflicts of interest.

## Author Contribution

**FK (Postgraduate Resident)**
*Data Analysis, Manuscript drafting, Study Design,*
**FZ (Associate Professor)**
*Critical Input and Final Approval.*
**SHK (Postgraduate Resident)**
*Literature Search*
**AR (Postgraduate Resident)**
*Literature Search*

*All authors reviewed the results and approved the final version of the manuscript. They are also accountable for the integrity of the study.*

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