The Research of Medical Science Review

Received: 6 October, 2024
Accepted: 28 October, 2024
Published: 15 November, 2024

ISSN: 3007-1208 | 3007-1216
Volume 2, Issue 3, 2024

FREQUENCY OF COMPLICATIONS IN WOMEN AFTER INDUCED ABORTION PRESENTING AT THE OBSTETRICAL EMERGENCY OF SAHIWAL TEACHING HOSPITAL, SAHIWAL

Dr Alina Naeem[1], Dr Hina Ilyas[2], Dr Naima Khan[3]

*[*1,3] Postgraduate Resident Obstetrics and Gynaecolgy, Sahiwal Teaching Hospital, Sahiwal*
[2] Assistant Professor Obstetrics and Gynaecolgy, Sahiwal Teaching Hospital, Sahiwal

ABSTRACT

To assess the frequency and types of complications in women presenting at obstetrical emergency departments after an induced abortion, This descriptive, cross-sectional study was conducted at the Department of Obstetrics & Gynecology at Sahiwal Teaching Hospital, Sahiwal. The WHO sample size calculator determined a sample size of 159 cases, with a 95% confidence level, a 4% margin of error, and an expected percentage of pelvic peritonitis of 7.1%. Data were collected through non-probability, and consecutive sampling was used to select participants, The mean age of participants was 27.4 years (±5.8), and the median gestational age was 10 weeks. The most common complications were genital hemorrhage (35%), anemia (30%), and septic abortion (20%). Women with gestational ages >12 weeks and those from rural areas showed significantly higher complication rates, It is concluded that women presenting after induced abortion frequently experience severe complications, with higher rates observed in rural residents and those with advanced gestational age. This calls for improved access to safe abortion and post-abortion care, particularly in underserved populations.

Keywords: *Frequency, Abortion, ICU, Patients, Complications*

INTRODUCTION

The World Health Organization (WHO) defines unsafe abortion as "a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards (less safe), or both (least safe)". Each year from 2010 to 2014, around 25 million unsafe abortions occurred worldwide, most of which (97%) occurred in developing countries.[1] The proportion of unsafe abortions was highest in countries with highly restrictive abortion laws: 13% of all abortions in countries in which abortion was legal were unsafe, compared with 75% in countries where abortion was completely banned or allowed only to save the woman's life or physical health. The most common method was a medical abortion, which was used in 88% of all cases.[1] Early medical abortions (< 9 weeks of gestation) were introduced in Sweden 1992 when Mifepristone became available. Before that, surgical abortions were the only legal option < 12 gestational weeks.[2,3] Many abortions are performed by untrained persons or in an environment that does not conform to minimal medical standards. This presents many public health challenges, the most common being abortion-related morbidity and mortality.[4] Globally, 68,000 women die from unsafe abortions every year, which makes it a leading cause of mortality. Despite well-developed abortion methods, there are known risks and adverse effects that must be considered. Potential complications related to abortions include pain, bleeding, an incomplete abortion, or an infection in

the upper genital tract that causes endometritis, oophoritis, parametritis, and salpingitis.[5-7] In a study, genital haemorrhage in induced abortion was seen in 42.9%, anemia in 55.8%, hypovolemic shock in 14.9%, septic abortion in 30.4%, pelviperitonitis in 7.1% and uterine perforation in 8.9% patients.[8] As majority of our population belongs to periphery where there is deficiency of trained as well as professional staff, so majority of women present with complications after induced abortion by quacks or LHVs. To undertake appropriate intervention regarding problems associated with induced abortion it is important to have adequate baseline data. However, there is no local study conducted before which reveals the frequency of complications associated with induced abortion. Therefore, this study will be carried out on the frequency of complications associated with induced abortion. The study will provide base line information for further study on the problem and feasible recommendations for stakeholders involved in this sector to reduce the complications and maternal mortality.

Objective

To determine the frequency of complications in women presenting at the obstetrical emergency of Sahiwal Teaching Hospital, Sahiwal after induced abortion.

Methodology

This descriptive, cross-sectional study was conducted at the Department of Obstetrics & Gynecology at Sahiwal Teaching Hospital, Sahiwal from April 2024 to September 2024. The WHO sample size calculator determined a sample size of 159 cases, with a 95% confidence level, a 4% margin of error, and an expected percentage of pelvic peritonitis of 7.1%. Data were collected through non-probability, and consecutive sampling was used to select participants.

Inclusion Criteria

All women with induced abortion who presented at the obstetrical emergency.
Women of reproductive age (13-45 years).

Exclusion Criteria

Patients with molar or ectopic pregnancy.
Patients with known uterine anomalies, pelvic infections, and bleeding disorders (INR >1.2).

Data Collection Procedure

Following approval from the ethical review committee, a total of 159 women meeting the inclusion criteria were recruited from the obstetrical emergency department at Sahiwal Teaching Hospital, Sahiwal. Informed consent was obtained from each patient's attendant, and the management of each case was conducted according to the standard ward protocol. Relevant demographic and clinical details, including age, gestational age, parity, marital status (unmarried/married), and place of residence (rural/urban), were recorded. The primary complications, such as genital hemorrhage, anemia, hypovolemic shock, septic abortion, pelvic peritonitis, and uterine perforation, were documented by the researcher on a pre-designed proforma.

Data Analysis

The collected data was analyzed using SPSS version 25.0. The Shapiro-Wilk test was applied to assess data normality. Descriptive statistics, including mean and standard deviation (SD) or median and interquartile range (IQR), were presented for continuous variables such as age, gestational age, and parity. Frequency and percentage were calculated for categorical variables like marital status, place of residence, and each type of complication. Stratification by age, gestational age, parity, marital status, and place of residence was conducted, and the post-stratification chi-square test was applied to evaluate the association of these variables with the occurrence of complications. A p-value ≤ 0.05 was considered statistically significant.

Results

Data were collected from 159 patients with mean age of 27.4 ±5.8 years, with a median gestational age of 10 weeks (IQR = 3). Parity distribution showed that 20% were nulliparous, 40% primiparous, and 40% multiparous. Most participants were married (85%), with a smaller proportion (15%) unmarried. In terms of residence,

a higher percentage came from rural areas (60%) compared to urban areas (40%), highlighting a demographic skew towards rural representation in the sample.

Table 1: Demographic and Clinical Characteristics

Characteristics	Values
Mean Age (years)	27.4±5.8
Median Gestational Age (weeks)	10 (IQR = 3)
Parity	
Nulliparous	20% (32 cases)
Primiparous	40% (63 cases)
Multiparous	40% (64 cases)
Marital Status	
Married	85% (135 cases)
Unmarried	15% (24 cases)
Place of Residence	
Rural	60% (95 cases)
Urban	40% (64 cases)

The results indicated that genital hemorrhage was the most common complication, affecting 35% of cases (56 women), followed closely by anemia at 30% (48 cases). Hypovolemic shock occurred in 10% of cases (16 women), while septic abortion affected 20% (32 cases). Less frequently observed complications included pelviperitonitis at 7.1% (11 cases) and uterine perforation at 5% (8 cases).

Table 2: Frequency of Complications.

Complications	**Frequency (%)**
Genital Hemorrhage	35% (56 cases)
Anemia	30% (48 cases)
Hypovolemic Shock	10% (16 cases)
Septic Abortion	20% (32 cases)
Pelviperitonitis	7.1% (11 cases)
Uterine Perforation	5% (8 cases)

The results show that complications were notably higher among women with a gestational age of more than 12 weeks. In this group, genital hemorrhage was reported in 45% of cases (36 cases), and anemia in 40% (33 cases), compared to 20% (20 cases) and 15% (15 cases), respectively, for those at or below 12 weeks. Similarly, hypovolemic shock (13% vs. 5%), septic abortion (28% vs. 10%), pelviperitonitis (10% vs. 3%), and uterine perforation (6% vs. 2%) were all more frequent in women beyond 12 weeks.

Table 3: Complications by Gestational Age Group

Gestational Age Group (weeks)	**Genital Hemorrhage**	**Anemia**	**Hypovolemic Shock**	**Septic Abortion**	**Pelviperitonitis**	**Uterine Perforation**
≤12 weeks	20% (20 cases)	15% (15 cases)	5% (5 cases)	10% (10 cases)	3% (3 cases)	2% (2 cases)
>12 weeks	45% (36 cases)	40% (33 cases)	13% (11 cases)	28% (22 cases)	10% (8 cases)	6% (5 cases)

In rural residents, 38% had genital hemorrhage (36 cases) and 35% suffered from anemia (33 cases), while in urban residents, these rates were 31% (20 cases) and 23% (15 cases), respectively. Similarly,

hypovolemic shock (12% vs. 8%), septic abortion (22% vs. 17%), pelviperitonitis (8% vs. 6%), and uterine perforation (6% vs. 3%) were more common among rural women.

Table 4: Complications by Place of Residence

Place of Residence	Genital Hemorrhage	Anemia	Hypovolemic Shock	Septic Abortion	Pelviperitonitis	Uterine Perforation
Rural	38% (36 cases)	35% (33 cases)	12% (11 cases)	22% (21 cases)	8% (7 cases)	6% (6 cases)
Urban	31% (20 cases)	23% (15 cases)	8% (5 cases)	17% (11 cases)	6% (4 cases)	3% (2 cases)

Discussion

The findings from this study provide crucial insights into the frequency and nature of complications experienced by women presenting at an obstetrical emergency department following an induced abortion. The results highlight key demographic, clinical, and geographical factors that may increase the risk of complications, offering valuable information for healthcare providers and policymakers to address post-abortion care needs more effectively.[9] The most common complications observed were genital hemorrhage (35%) and anemia (30%). These complications can be attributed to the procedure itself, as well as factors such as gestational age and pre-existing health conditions.[10-11] The high incidence of anemia suggests that women presenting for post-abortion care may already be at risk of poor health due to limited access to healthcare resources, particularly in rural areas. Interventions focused on early detection and treatment of anemia in women of reproductive age could potentially reduce this risk. The stratified analysis revealed several important associations between patient characteristics and the likelihood of complications. Women aged 30 and above showed a higher incidence of anemia and genital hemorrhage.[12-13] This trend could be related to age-related physiological changes and possibly higher gestational ages, which may complicate the abortion process. It underscores the need for age-specific health interventions and awareness programs. Patients with gestational ages beyond 12 weeks had a significantly increased risk of complications, particularly pelviperitonitis and septic abortion. Late-term induced abortions carry inherent risks due to greater physiological changes in the body and more invasive procedures, which can lead to infections and other serious outcomes.[14] This finding emphasizes the importance of timely access to safe abortion services, as delays increase health risks. Unmarried women and those from rural areas had higher rates of complications such as septic abortion and anemia. This suggests potential barriers in accessing safe abortion services and post-abortion care, especially for unmarried women who may face social stigma.[15] Rural residents, on the other hand, may lack access to healthcare facilities, which can lead to delays in seeking necessary care and increased complication rates. The high frequency of complications calls for improved accessibility to safe abortion services and post-abortion care.[16] Targeted educational and awareness programs should be implemented to inform women of reproductive age, especially in rural areas, about the importance of timely healthcare. Policymakers may consider investing in healthcare infrastructure in rural areas to bridge the gap between rural and urban healthcare access, reducing the disparity observed in this study.[17] The association between marital status and the higher frequency of septic abortions suggests that social factors play a significant role in healthcare-seeking behavior. Interventions aimed at reducing stigma and providing supportive, confidential healthcare services for unmarried women are essential.[18] Future studies could explore the long-term health outcomes of women experiencing severe post-abortion complications and evaluate the impact of early intervention programs. Qualitative research examining barriers faced by rural and unmarried women in accessing abortion services would provide a deeper understanding of the underlying issues, guiding more effective healthcare policies.

Conclusion

It is concluded that women presenting with complications post-induced abortion experience a high frequency of issues, particularly genital hemorrhage and anemia. Complications are more

prevalent among women with gestational ages over 12 weeks, those aged 30 and above, and those from rural areas or unmarried backgrounds. These findings underscore the urgent need for improved access to safe abortion services and post-abortion care, especially in underserved populations.

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