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Obstetrics & Gynaecology

COMPARISON BETWEEN FIRST AND SECOND TRIMESTER ABORTIONS IN INDIA

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ABSTRACT

Background: This paper aims to study first and second trimester abortions. It includes epidemiology, aetiology, different methods of abortion used, socio demographic difference, laws affecting abortion, determinants and outcome of abortion and embodied experiences of women who underwent abortion. **Method:** Data was collected over a period of one year from the department of obstetrics and gynaecology at Integral University, Lucknow to conduct an observational study. **Result:** First trimester abortions had more incidence than second trimester. However, age, previous mode of delivery, mode of induction, parity all showed no significant difference between the first and second trimester abortions. **Conclusion:** The study shows the age group and parity which had the most abortions. Hence this should be the target group who need a stricter watch right from the time of conception to help curtail complications.

INTRODUCTION

According to 2021 assessment by World Health Organization, "around 73 million induced abortions take place globally each year." [1]

India began to legalize abortions after the Medical Termination of Pregnancy (MTP) Act came into being in 1971.

"In India, it is estimated that about 6 million abortions take place every year, of which 2 million are spontaneous and 4 million are induced. Of the induced abortions, nearly 5-6 lakhs are legal and the rest are estimated to be illegal abortions." [2]

"The World Health Organization define abortion as loss or termination of a pregnancy with a fetus aged younger than 20 weeks' gestation or weighing <500 g." [3]

First trimester abortions are those occurring in the first 12 weeks of pregnancy. Second trimester abortions are those occurring between 13 to 27 weeks of pregnancy. There is increased risk of mortality and morbidity and lack of services associated with second trimester abortion. Abortion can be spontaneous or induced.

Different types of spontaneous abortions include threatened, inevitable, incomplete, complete and missed. Threatened abortion is where the process of abortion has started but is at a stage from where it can be reversed, that is cervical os hasn't opened yet.

Inevitable abortion is a type of abortion where the process has reached a stage where it can't be reversed, that is cervical os has opened. Incomplete abortion is one in which products of conception have started coming out but the process is not yet complete. Complete abortion is one in which all products of conception have come out and the process of abortion is complete and cervical os has closed. Missed abortion is "described as dead products of conception that have been retained for days or weeks within a uterus with a closed cervical os." [3]

There can be a variety of indications for first trimester abortions like fetal anomalies, medical complications. Second trimester abortions can be a result of various complications, major anomalies, late recognition of pregnancy, financial instability, stigma associated with it, lack of awareness, sex discrimination, lack of providers, resources and services, poverty, change of circumstances, on humanitarian grounds in cases of rape, incest.

Different methods can be used for inducing abortion which include both medical and surgical procedures. Medical method involved the use of mifepristone, misoprostol or both

in combination. Use of Extra amniotic instillation of ethacridine and intra-amniotic instillation of saline to induce abortion has now become obsolete. Surgical procedures involve methods like Suction Evacuation which is practiced in the first trimester and dilation and evacuation done in the second trimester.

"Each year, 4.7–13.2% of maternal deaths can be attributed to unsafe abortion." [1]

Different complications associated with abortions are haemorrhage, shock, retained products of conception, infection, uterine perforation and cervical injury.

Women's First-hand Account Of Abortion

During the period of study, abortion was induced due to a variety of reasons like medical complications, not wanting a child, poverty and sex discrimination.

I didn't know I was pregnant as there were no typical signs of pregnancy. I didn't even gain weight and had no morning sickness. Moreover, I have just had a baby and don't want another child right now. (Shabana, 26, 14 weeks)

We already have 4 daughters and this is my 5th pregnancy. We wanted a son so we kept trying. But my husband no longer wants any more children. (Rubina, 37, 16 weeks)

Women undergoing second trimester abortion go through quite a taxing task of expelling the fetus out of the womb which to a certain degree replicates labour and childbirth process which can be extremely overwhelming, unrewarding and damaging. Whereas women undergoing abortion earlier would describe it as simple bleeding or passage of tissues without having undergone the whole elaborate labor. [4]

It was extremely traumatic going through the pain, contractions and you don't even have anything at the end of it. It was very disturbing and unexplainable. (Mamta, 30, 19 weeks) Effective support and data regarding second trimester abortions is needed to remove the stigma, lack of clarity, to lessen the challenges associated with second trimester abortions.

Laws Governing Abortion

Abortion came to be legalized in India quite late and as a measure to control population which was a big issue. It was in 1966 in which Shantilal Shah Committee recommended "When the woman, (with or without the concurrence of her partner) feels that a particular pregnancy is intolerable and does not desire to bear the child. ...[she] should be the master of her own body and decide the question of motherhood for herself." [5]

MTP Act came into existence in 1971. It permitted the termination of pregnancy up to 20 weeks. The act also states who can perform the termination, where can it be performed and under what circumstances. According to the 2020 amendment, upper limit of termination of pregnancy was increased from 20 to 24 weeks under certain circumstances.

It also mentions "Proposing requirement for opinion of one Registered Medical Practitioner for termination of pregnancy, up to 20 weeks of gestation and introducing the requirement of opinion of two Registered Medical Practitioners for termination of pregnancy of 20 weeks up to 24 weeks of gestation." [6]

Methodology

Data was collected from Sept 2023 to Sept 2024 from the Department of Obstetrics and Gynaecology at Integral Institute of Medical Sciences and Research, Integral University, Lucknow to conduct an observational study.

Sample Size: The sample size was determined using the formula for calculating sample size in a cross-sectional study. i.e.

$$n = \frac{Z^2 \times p \times (1 - p)}{d^2}$$

Where,

- n = required sample size
- Z = Z-score corresponding to the desired confidence level (e.g., 1.96 for a confidence level of 95%)
- p = estimated proportion of the population with the characteristic of interest (e.g., prevalence of abortion in India) (3.4%) [7]
- d = margin of error (e.g., 0.05 for a 5% margin of error)

Based on previous research indicating a prevalence of abortion in India 3.4%, the initial sample size for this study was calculated as 51. Taking 10 % extra final sample size came 56.

During this period about 55 cases were studied. Comparison was drawn between first and second trimester abortion on basis of age, religion, parity, gestational age, previous history, induction methods used, experience of women undergoing abortion.

RESULTS

1. Correlation Of Age With First And Second Trimester Abortion

Table 1

Age	1 st	2nd
<20	2	-
21-25	18	10
26-30	11	7
31-35	4	3

Table 1 shows number of first and second trimester abortions in different age brackets. The highest number of both first and second trimester abortion is seen in the same age bracket that is between 20-25 years.

2. Previous mode of delivery in first vs. second trimester abortion

Table 2

Previous mode of delivery	1st	2nd
Previous LSCS	8	2
Previous normal	14	10
Primi	9	5
Previous abortion	4	3

Table 2 demonstrates the different modes of prior deliveries in both first and second trimester abortions. It can be concluded that most number of women undergoing both first and second trimester abortions had previous history of normal vaginal deliveries.

3. Different modes of induction used in first and second trimester abortion

Table 3

Mode of Induction	1 st	2nd
Suction evacuation (26)	16	10
Medical (19)	12	7
Spontaneous (10)	7	3

Table 3 denotes different modes of induction used in first and second trimester abortions. According to the data collected, most commonly used mode of induction is suction evacuation in both.

4. Number of abortions in first vs. second trimester

Table 4

First trimester	35
Second trimester	20

Table 4 shows that the number abortions of first trimester are more than the number of second trimester abortions.

5. Parity distribution in first and second trimester abortion

Table 5

Parity	1st	2nd
P2	21	10
P3	1	2
P0	9	5
P1	3	4

Table 5 depicts different parity in first and second trimester abortion. According to the data, both types of abortions are higher in women having parity two.

6. Distribution of religion in first and second trimester abortion

Table 6

Religion	1 st	2nd
Islam (28)	16	12
Hinduism (27)	19	8

Table 6 shows distribution of religion in first and second trimester abortion. Both religions have more or less similar readings.

Some criteria like previous history of abortion, gestational age and parity are associated with the outcome of safe abortions. The study also shows that second trimester abortion were more common in more educated people.

CONCLUSION

This paper is an observational study between first and second trimester abortions and it draws comparisons between them.

It also highlights that first trimester abortions had more incidence than second trimester. However, age, previous mode of delivery, mode of induction, parity all showed no significant difference between the first and second trimester abortions.

Provision of services, resources and health providers at grassroots level will help in reduction of unsafe practices and the associated risk and further complications. Greater access, feasibility and affordability of first trimester abortion will reduce second trimester abortion. Although, literature mentions that is only affected partially. [8,9]

Since morbidity and mortality is associated with abortions, it is hence essential to make it safer especially in second trimester.

Government bodies, health providers and doctors should take responsibility to ensure that safe abortions are being performed as well as to discourage and reduce abortions following sex determination and thereby preventing gender discrimination.

Laws regarding abortion needs to be revised and updated globally so that women no longer have to choose between unsafe methods and travelling longer distances to avail safe measures.

More studies and more data need to be collected for more insights.

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