

Obstetric Outcome in Present Pregnancy in Patient with History of Previous Spontaneous Abortion

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Abstract: *The study aimed to assess obstetric outcome in present pregnancy in patients with history of previous spontaneous abortion. A total of 350 women with the history of previous spontaneous abortion were included in the study. In the study subjects per abdominal examination was done. Antenatal grips, palpation for any uterine contractions, foetal heart sounds auscultation was done. Majority of the enrolled females had previous history of one abortion (74.57%) followed by two (17.14%) and three (6.86%) abortions history. 100 females (28.57%) showed a positive history of curettage. 10% of the enrolled females (35) had a history of 1st trimester PV bleeding during present pregnancy. History of PIH or pre-eclampsia was noted in 15.43% of cases. Preterm delivery was noted in 14.86% of the women. In 11.43% (40) of cases recurrence abortion was noted among which 20 cases had spontaneous abortion while 20 patients had induced abortion. Vaginal delivery was the commonest outcome in females who had pregnancy continued for beyond 20 weeks (51.71%). In 125 females (35.71%) endured caesarean section. For females with pregnancy <20 weeks, commonest outcome was check-curettage (n=21, 6%), followed by induced abortion (n=20, 5.71%). Commonest indication for LSCS was hydramnios (n=33, 26.83%), followed by previous LSCS history (n=18, 14.63%), hypertensive disorders of pregnancy (n=17, 13.82%) and meconium-stained liquor (n=16, 13.01%). The poor fetal outcomes noted were LBW (n=139, 39.71%), followed by congenital anomalies (n=19, 5.43%), IUD (n=7, 2%) and still birth (n=3, 0.86%). The study suggested that patients with history of previous spontaneous abortion are associated with adverse pregnancy outcome, with increased frequency of recurrent abortion and caesarean sections.*

Keywords: Adverse pregnancy outcome, Pregnancy, Previous spontaneous abortion, Miscarriage.

1. Introduction

A woman undergoes a special transition toward completion during pregnancy. Pregnancy needs to be regarded as a typical physiological occurrence in a woman's life. But occasionally, circumstances take many unexpected turns and turn a pregnancy's positive outcome into a catastrophe. [1] The term "abortion" refers to the natural or artificial termination of a pregnancy before foetus viability. It is derived from the Latin word "aboriri" meaning to miscarry. [2] National Centre for Health Statistics, the Centres for Disease Control and Prevention (CDC), and the World Health Organisation (WHO) defined Abortion as any pregnancy termination, whether spontaneous or induced, before 20 weeks of gestation or with a foetus born weighing less than 500 g. [1] Around 8% to 20% of known pregnancies result in spontaneous abortion. [3] The incidence of spontaneous abortions declines with each gestational week, with the first 12 weeks of pregnancy accounting for more than 80% of all cases. [4] In India, spontaneous abortion occurs more frequently in urban than in rural settings. [5] The rate of spontaneous abortion in a second pregnancy among women who have experienced one range from 13% to 20%. [1]

Maternal age, closely spaced pregnancies (less than 3 to 6 months apart), a history of previous spontaneous abortions, maternal diabetes, and maternal smoking during pregnancy are risk factors for spontaneous abortion. [6, 7] Recurrent abortions are primarily brought on by thrombophilia, hormonal imbalances, genetic defects, and anatomical diseases. Women who have previously had an abortion are more likely to experience a threatened abortion, a preterm

birth, and foetal loss. [8] Spontaneous abortion presents a greater risk of adverse consequences in successive pregnancies which include vaginal bleeding in the first trimester, preterm delivery, intra-uterine death (IUD), premature rupture of membrane (PROM), pregnancy-induced hypertension, pre-eclampsia, recurrence of abortion, intra-uterine growth restriction (IUGR), stillbirth, low birth weight, low APGAR score, congenital anomaly, neonatal intensive care unit (NICU) admission. [2, 9, 10] Therefore, pregnancies with a history of spontaneous abortions should be treated as high-risk pregnancies, and extra precautions should be taken during the antenatal period to prepare for these outcomes. [2] Hence, the present study was undertaken to study obstetric outcomes in present pregnancy in patients with a history of previous spontaneous abortion.

2. Materials and method

The present prospective observational study was conducted at the department of obstetrics and gynaecology, a tertiary care hospital, after obtaining institutional ethical committee approval. A total of 350 pregnant women with a history of previous spontaneous abortion and willing to participate in the study were recruited in the study. Whereas, patients with a history of previous induced abortion, conceived with the help of artificial reproductive techniques, and patients with co-morbidities such as hypertension, thyroid disease, diabetes mellitus, chronic renal disease, heart disease, autoimmune disorders, and a history of trophoblastic disease and the patient not willing to participate in the study were excluded from the study.

A detailed history of each participant with respect to age, menstrual and obstetric history, and comorbidities such as hypertension, diabetes mellitus, chronic renal disease, and heart disease were noted in the proforma. Past history of checkcurettage followed by previous spontaneous abortion was also obtained. A thorough general physical and systemic examination involving height, weight, anaemia, oedema, and vital data was carried out. Routine examination of haemoglobin levels, urine microscopy, ABO grouping, Rh typing, and random blood sugar levels was done along with abdominal ultrasound in all cases. The patients directly admitted to the labour ward with a history of spontaneous abortion in a previous pregnancy were also enrolled in the study and outcomes of the study were observed. Per abdominal examination involving various antenatal grips, palpation for the presence of uterine contractions, and auscultation for fetal heart sounds was done for the patients admitted for delivery. Per vaginal examination was done for pelvic assessment to rule out cephalopelvic disproportion, and to diagnose whether the patient was in labour or not. If the patient was in labour, the progress of labour was assessed.

The various parameters assessed include demographic variables (gender, body weight, height, body mass index (BMI)), frequency of complications of present pregnancy (vaginal bleeding in the first trimester, preterm delivery, intra-uterine death (IUD), premature rupture of membrane (PROM), pregnancy-induced hypertension, pre-eclampsia, recurrence of abortion in a patient with a history of previous spontaneous abortion), frequency of fetal outcomes in present pregnancy (intra-uterine growth restriction (IUGR), stillbirth, low birth weight, low APGAR score at 1 min, congenital anomaly, neonatal intensive care unit (NICU) admission) and mode of delivery in present pregnancy (normal vaginal delivery, instrumental delivery or LSCS).

Statistical analysis

Data was collected in specified proforma and entered into a Microsoft Excel sheet. Data were analyzed using GraphPadInStat v3.0 software. Continuous variables were expressed in terms of mean \pm SD whereas, categorical variables were expressed in percentage and frequency. Data were expressed in figures and diagrams wherever necessary.

3. Results

The mean age of the study participants was 23.32 \pm 4.03 years ranged from 18-39 years. Most of the enrolled females were G2 (65.71%), followed by G3 (18.57%), G4 (7.71%), G5 (5.14%), G6 (2%), and G7 (0.86%). Majority of the enrolled females had previous history of one abortion (74.57%). 17.14% showed two abortion history while 6.86% showed three abortions history (figure 1).

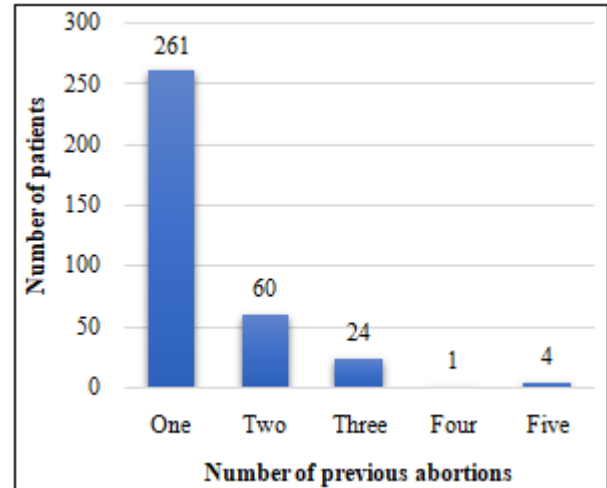


Figure 1: Distribution of cases based on number of previous abortions

Of the 350 enrolled females, 100 females (28.57%) showed a positive history of curettage. 10% of the enrolled females (35) had a history of 1st trimester PV bleeding during present pregnancy. History of PIH or pre-eclampsia was noted in 15.43% of cases. Preterm delivery was noted in 14.86% of the women. The incidence of PROM/PPROM was found to be 14.29% (50). In 11.43% (40) of cases recurrence abortion was noted among which 20 cases had spontaneous abortion while 20 patients had induced abortion. Vaginal delivery was the commonest outcome in females who had pregnancy continued for beyond 20 weeks (51.71%). In 125 females (35.71%) endured caesarean section. For females with pregnancy <20 weeks, commonest outcome was checkcurettage (n=21, 6%), followed by induced abortion (n=20, 5.71%).

Commonest indication for LSCS was hydramnios (n=33, 26.83%), followed by previous LSCS history (n=18, 14.63%), hypertensive disorders of pregnancy (n=17, 13.82%) and meconium-stained liquor (n=16, 13.01%).

The poor fetal outcomes noted were LBW (n=139, 39.71%), followed by congenital anomalies (n=19, 5.43%), IUD (n=7, 2%) and still birth (n=3, 0.86%).

4. Discussion

Abortion has been suggested to be related to fetal pathology, congenital abnormality, low birth weight, low Apgar score, intrauterine growth retardation, and preterm labor in the next pregnancy. [11] Many females also experience recurrent miscarriages, which are usually defined as the occurrence of three or more consecutive miscarriages, and it affects 1% of women of reproductive age. The etiology of miscarriage is often complex and obscure. [12] Literature search revealed that though there is published data highlighting the risk on obstetric and fetal outcomes in cases with previous history of spontaneous abortion, such studies are few from Indian hospitals. The main aim of the study was to examine the obstetric outcome in present pregnancy in patients with history of previous spontaneous abortion.

In this study majority of patients had one abortion followed by two and 3 three abortions. In the study of Rama et

al.38%, 47%, and 15% of cases had one, two and three abortions respectively. [13] There is controversy regarding whether the number of historical abortions have a direct relationship with pregnancy outcomes in future or not. In the study by Pradhan et al.34% enrolled females had history of 2 or more pregnancy losses and came with recent abortion, while 66% females had history of 2 or more pregnancy losses but were pregnant at the time of inclusion, of which, 19% were <20 weeks gestation and 47% were >20 weeks gestation. [14] One or more previous live birth has a positive influence on next pregnancy with 87.5% success rate, while previous pregnancies ending in abortions and a bad obstetric history had 74% and 66.6 % success rates respectively. In the study by Muzaffar et al. showed that the risk of abortions increased with increasing number of previous pregnancy losses. [9]

The causes for bleeding in first trimester can be spontaneous abortion, induced abortion, ectopic pregnancy, molar pregnancy, and local factors. Terms that are used to describe bleeding during first trimester rare threatened inevitable, incomplete, complete and missed abortion. [15] In this study 35 of the female participants (10%) reported first-trimester PV bleeding during the current pregnancy in the past.54 females (15.43%) had pre-eclampsia or PIH in the past. Kashanian et al. suggested that the risk of PV bleeding during first trimester is associated with 1.57 times more in patient with abortion history. They also noted that the frequency of eclampsia or pre-eclampsia was 3.75% in the group with abortion history, while it was found in none of the cases in the control group. [10] Furthermore, in the study by Bhattacharya et al. women with an initial miscarriage were 3.3 times more likely to suffer from pre-eclampsia, 1.7 times more likely to have threatened miscarriage and 1.3 times more prone to have nonspecific antepartum haemorrhage. [16]

In this study, 40 of the enrolled cases (or 11.43%) experienced an abortion again, with 20 of those instances being spontaneous abortions and 20 being induced abortions. In the study by Rama et al. rate of abortion was noted in 5.5% in the group with previous history of abortion, while the control group reported abortion rate of 3%. [13] In the study by Muzaffar et al. risk of abortions increased with increasing number of previous pregnancy losses. The incidence of miscarriage was found to be 9.4%, 14.8%, 20% and 100% after first, second, third and fourth abortion respectively. [9] However, in the study by Kashanian et al. rate of abortion was noted in 16.12% in the group with previous history of abortion, however the same was numerically higher in the control group (21.42%). [10] This points to the fact that current published data is debatable, and hence more studies are needed to assess impact of previous abortion history on risk of abortions in current pregnancy.

In this study, 305 enrolled females (87.14%) had pregnancies that lasted over 20 weeks. When a woman's pregnancy lasted longer than 20 weeks, vaginal birth was most frequently the result (51.71%).35.71% of 125 females underwent caesarean sections. Induced abortion was the second-most frequent result for females with pregnancies under 20 weeks (n=20, 5.71%), followed by check-curettage

(n=21, 6%). Hydramnios (n=33, 26.83%), prior LSCS history (n=18, 14.63%), hypertensive disorders of pregnancy (n=17, 13.82%), and meconium-stained liquid (n=16, 13.01%) were the most frequent reasons for LSCS. These findings are comparable with previous reports. [2, 9, 10, 13, 17]

In this study, 59 newborns' were admitted in NICU. The most frequent cause was complications linked to preterm birth (37, 62.71%), then LBW from IUGR and RDS. LBW (n=139, 39.71%), congenital abnormalities (n=19, 5.43%), IUD (n=7, 2%) and stillbirth (n=3, 0.86%) were the poor foetal outcomes reported. In the study by Jivraj et al.9.9% of the neonates were admitted in special care unit, of which commonest indication was prematurity. [9]

5. Conclusion

From the study it was observed that patients with history of previous spontaneous abortion are associated with adverse pregnancy outcome, with increased frequency of recurrent abortion and caesarean sections. Nearly half of the neonates born to females with abortion history were either low birth weight or affected by IUGR. The pregnancy outcome in terms of maternal and foetal complications can be improved by giving proper antenatal care, with special attention to females with previous abortion history.

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Author Profile



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