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Original Research Article

## Pregnancy outcome in patient who had first trimester bleeding in previous pregnancy: a prospective study

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### ABSTRACT

**Background:** Patient who had history of spontaneous abortion in her previous pregnancy is associated with adverse outcome in her present pregnancy.

**Methods:** A total 63 pregnant women attending OPD and admitted in department of obstetrics and gynecology, Yenepoya Medical College, from April 2017 to September 2017, considered and outcome were studied.

**Results:** Out of 63 patient's majority (57.1%) of patients belong to the age group 21-29 year. Anemia was found to be very severe in 4.3%, severe in 10% and moderate in 30% patients. Maximum patients (45.7%) were with history of previous one abortion followed by previous two abortions (38.6%). The final outcomes were term livebirth 47 (74.3%), abortion 9 (14.3%), preterm delivery 5 (8.6%), and stillbirth 2 (2.8%) caesarean section (23.3%) for various indications. 19.23% had term PROM, 9.09% had PPROM, 5.76% had term IUGR, 3.84% term IUD, preterm IUD accounts for 9.09% and still birth accounted for about 1.92% which was term, pre-eclampsia accounted for 4.76%, malpresentation for 7.93%, total 3 cases of antepartum hemorrhage out of which placenta previa accounts for about 3.1% and abruption for 1.58%, manual removal of placenta 4.7% and low birth weight 7.6%.

**Conclusions:** Previous history of spontaneous abortion is associated with adverse pregnancy outcome. There is increased risk of abortion, preterm delivery, need for caesarean sections and fetal loss which can be reduced by booking and giving antenatal care.

**Keywords:** First trimester bleeding, Pregnancy complications, Recurrent abortion

### INTRODUCTION

Spontaneous pregnancy loss or miscarriage (abortion before 24 weeks of gestation) occurs in ~15% of pregnancies.<sup>1</sup> In India occurrence of spontaneous abortion in urban areas is high as compared to rural area. Risk of recurrent miscarriage (three back to back spontaneous abortions) has been reported in 0.5-3% of pregnancies and is more common in women with initial miscarriage.<sup>1,2</sup> The definite cause for previous spontaneous abortion cannot be found in about half of cases in spite of thorough investigations.<sup>2</sup> The main causes for recurrent abortions include anatomical disorders, hormonal abnormalities, genetic anomalies and thrombophilia.<sup>2</sup>

Previous abortion in a women increases risk of threatened abortion, preterm delivery, and fetal loss.<sup>3</sup> These factors has to be considered when deciding for antenatal close observations and management of pregnancy in patients with history of previous spontaneous abortions.<sup>3</sup> Studies have reported a favourable outcome with 70-80% live birth with counselling and supportive care in patients with previous abortions.<sup>4</sup>

The aetiology of spontaneous abortion is often complex and obscure. The causes of abortion can be;

- Fetal factors - aneuploidy
- Maternal factors - infections

- Medical disorders - diabetes, thyroid dysfunction, cardiac diseases
- Radiation and chemotherapy for cancer
- Nutritional factors - extreme obesity and severe hyper emesis gravidarum
- Drug abuse and social habits - alcohol and smoking
- Immunological factors - anti-phospholipid antibody syndrome.<sup>5</sup>

**Objective of this study were**

The present study is aimed at fulfilling the following objectives:

- To study the pregnancy outcome in a patient with history of first trimester bleeding in her previous pregnancy, which can be evaluated
- To evaluate various organic pathologies in order to prevent consequences like threatened abortion, preterm labour, pre-eclampsia.

**METHODS**

A total 63 pregnant women attending OPD and admitted in department of obstetrics and gynaecology, Yenepoya Medical College, from April 2017 to September 2017, considered and outcome were studied.

**Inclusion criteria**

- It was a prospective study of 63 pregnant women who were admitted in department of obstetrics and gynecology, Yenepoya Medical College, from April 2017 to September 2017, considered and outcome were studied.

**Exclusion criteria**

- Patients with induced abortion, history of spontaneous abortion with twin gestation, medical disorders like PIH, chronic hypertension, GDM, Juvenile DM, Heart disease, were excluded from the study.

**Statistical analysis**

A total statistical analysis was performed using the statistical packages for the social sciences version 16.0.1. A p value of <0.05 was considered as statistically significant.

**RESULTS**

Table 1 describes about demographic data of the patient like age, education level, socio economic status, occupation, annual income of family. Majority of the patients belonged to age group of 21-29 years, most of them had a formal education till primary level and were home maker by occupation, lower middle class according

to modified Kuppuswamy classification of socio-economic status who had family income of less than 50,000 Rs. per annum.

**Table 1: Demographic data.**

Variable	Value	%
Age (mean)	21-29 years	57.1%
Educational level	Primary level	61.4%
Socio economic status	Lower middle class	93%
Occupation	Home maker	91%
Annual income	<50,000	83%

Table 2 depicts number of previous abortion patient had. Majority of patients had previous 1 abortion which accounted for 45.7%, previous 2 and 1 abortion were 38.6% and 15.7% respectively.

**Table 2: Patients with total number of previous abortions.**

Number of previous abortions	Number (N = 63)	%
1	28	45.7%
2	24	38.6%
3	11	15.7%
Total	63	100%

**Table 3: Outcome of pregnancy.**

Outcome	Number (N = 63)	%
Full-term delivery	52	82.5%
Preterm delivery	7	11%
I <sup>st</sup> trimester abortion	4	6.5%
II <sup>nd</sup> trimester abortion	0	0%

**Table 4: Adverse outcome of pregnancy.**

Adverse outcome	Number	%
PROM	Term PROM	10 19.23%
	Preterm PROM	1 9.09%
IUGR	Term IUGR	3 5.76%
	Preterm IUGR	1 9.09%
IUD	Term IUD	2 3.84%
	Preterm IUD	1 9.09%
Still birth (term)	1	1.92%
Pre-eclampsia	3	4.76%
Mal presentation	5	7.93%
Antepartum haemorrhage	Placenta previa	2 3.1%
	Placental abruption	1 1.58%
Manual removal of placenta	3	4.76%
Low birth weight	6	9.5%

Table 3 depicts outcome of pregnancy who had previous history of spontaneous abortion. Majority of patients that is 82.5% had full term delivery, only 11% of patients had preterm delivery, remaining 6.5% had abortion during first trimester.

Table 4 shows adverse outcome of pregnancy in patients studied. 19.23% had term PROM, 9.09% had PPROM, 5.76% had term IUGR, 3.84% term IUD, preterm IUD accounts for 9.09% and still birth accounted for about 1.92% which was term, pre-eclampsia accounted for 4.76%, malpresentation for 7.93%, total 3 cases of antepartum haemorrhage out of which placenta previa accounts for about 3.1% and abruption for 1.58%, manual removal of placenta 4.7% and low birth weight 7.6%.

**Table 5: Mode of termination of pregnancy.**

Mode of termination of pregnancy	Number	%
FTND	21	34%
LSCS-emergency	19	31%
Instrumental delivery	11	17.5%
Spontaneous abortion	4	6.5%
Abnormal labour with full term IUD	2	2.5%
Abnormal labour with stillborn	1	1.5%
Abnormal labour with preterm	4	6%
Abnormal labour with preterm with IUD	1	1%
Total	63	100%

In Table 5 it could be understood that FTND was 21 accounted for 34%, LSCS-emergency was 19 with total of 31%. Instrumental delivery was 11 total of 17.5%, spontaneous abortion for 6.5%, abnormal labour with full term IUD accounts for 2.5%, abnormal labour with stillborn accounts for 1.5%, abnormal labour with

preterm delivery accounts for 6%, abnormal labour with preterm with IUD 1%.

## DISCUSSION

First-trimester bleeding is not only associated with miscarriage but also with a higher rate of pregnancy complications. There is a strong association between first-trimester vaginum bleeding and adverse pregnancy outcome. The probability of abortion and adverse pregnancy outcome increases as amount and duration of bleeding increase, especially when accompanied with abdominal pain. The outcome has been analysed with respect to maternal and fetal outcome. Maternal outcomes were noted as normal full-term deliveries, preterm deliveries, premature rupture of membranes, malpresentation, antepartum hemorrhages, cesarean section, instrumental delivery, manual removal of placenta, recurrent abortions. Fetal outcome were intrauterine growth restriction, low birth weight, admission to NICU, IUD, still birth.

In comparison with women with a previous successful pregnancy, this study data suggests that women with an initial miscarriage have an increased risk of some obstetric complications. These complications include recurrence of abortion, instrumental delivery, PROM and ectopic pregnancy. They are also more prone to preterm deliveries. These include pre-eclampsia, threatened miscarriage, antepartum hemorrhage, induced labour, instrumental delivery and manual removal of placenta, IUGR, preterm delivery, malpresentation and low birth weight.

**Table 6: Comparison of the current study results with previous studies.**

Results	Current study	Jivraj et al, <sup>6</sup>	Battacharya et al, <sup>7</sup>	Sheiner et al, <sup>2</sup>	Agarwal et al, <sup>8</sup>
FTND	21	-	-	-	74.3
Preterm delivery	7	13	9.2	-	8.6
Preeclampsia	3	-	4.4	5.1	-
Abortion	4	-	27.1	9.6	14.3
Instrumental delivery	11	-	26.7	-	-
Antepatum haemorrhage	3	-	12	2	-
Malpresentation	5	-	18	7	-
Manual removal of placenta	3	-	3.9	-	-
Caesarean delivery	19	36	4.2	15.9	23.3
Low birth weight	6	-	8.5	9.5	-
IUGR	3	-	2.6	2	-
Still birth	1	2.5	1	-	2.8
IUD	3	4	0.8	1.7	-

As shown in Table 6 Battacharya et al, stated that miscarriage group faced a higher risk of pre-eclampsia (4.4%), threatened abortion (27.1%), rate of caesarean section (4.2%), preterm delivery (9.2%) and low birth weight (8.5%). Incidence of high-risk factors were also

increased in the present study as described in above results.<sup>7</sup> Taylor et al reported an increased incidence of Placenta previa in patients with a previous abortion, supporting the present study.<sup>9</sup> Jivraj et al, in September 2000 found that rates of preterm delivery (13%), perinatal

loss 2.5% and caesarean section (36%) were significantly higher than those of control group.<sup>6</sup>

## CONCLUSION

Previous unfavourable pregnancy outcome increases the risk of adverse outcome in the future pregnancies. There is association between previous spontaneous abortion and PROM (19%), IUD (3%) in the subsequent pregnancies. There is also increase in the incidence of IUGR, still birth, recurrence of abortion and preterm delivery in the subsequent pregnancies, preceded by spontaneous abortions. As the number of previous abortions increase the incidence of successful outcome decreases. The numbers of previous abortions increase the incidence of low birth weight increases. The percentage of operative deliveries is more in the cases who had previous abortions. Previous abortions have a definite impact on the successful outcome of future pregnancies. Hence for such pregnancies, careful antenatal care is mandatory. Careful surveillance is required in pregnancies preceded by spontaneous abortions, for early detection of possible complications.

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