

Clinical Risk Factors Associated with Miscarriage

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ABSTRACT

Aim: To identify the risk factors in patient came in OPD and in emergency with sign and symptoms of miscarriage.

Method: Retrospective Cross Sectional was conducted at the Department of Obstetrics & Gynaecology, Lady Willingdon Hospital Khairpur Medical College Khairpur Mir's from 1st January 2021 to 31st December 2022. Two thousand, one hundred and thirty patients of miscarriage were enrolled. Patient with congenital abnormal foetus and still birth were not included.

Results: The majority of patients were more than 35 years of age was 974 (41%). It was also noted that abortion was more common in multigravida 1215 (57%). The risk factors of abortion were 1735 (81.4%) had lack of history of taking folic acid and multivitamins.

Practical Implication: Poor socioeconomic status, lack of knowledge, illiteracy, marital problems, and physical abuse are significant risk factors for miscarriage, necessitating the provision of appropriate clinical and supportive information.

Conclusion: The risk factors of miscarriage include age of mother, lack of history of taking folic acid and multivitamins during antenatal period increased body mass index and previous history of miscarriage physical abuses, history of infertility and h/o of smoking Berri and Hukka are significant.

Keywords: Risk factors, Miscarriage, Outpatient Department, Incidence

INTRODUCTION

Miscarriage is a pregnancy that ends spontaneously before 24 weeks of gestation¹. Miscarriage is the most common adverse outcome of pregnancy, occurring 10-20% of clinical pregnancies^{1,2}. It is estimated that one out of four clinical recognized pregnancies will end in miscarriage during first trimester and 1% experience second trimester miscarriage^{3,4}.

Spontaneous miscarriage is multifactorial in aetiology, with biological, environmental, obstetric and lifestyle factors being shown to play a role⁵. The risks of miscarriage like increase maternal age, psychological stress e.g. financial or marital problems, death of close relative, divorce, physical and non-physical abuse and loss of social support associated with the likelihood of miscarriage^{1,6}. Other risk factors include obesity, underweight, caffeine, alcohol, cigarette smoke, lack of dietary supplementation such as folic acid multivitamins, heavy exercise and occupation requiring heavy lifting and shift work particularly night shift work have also been shown to increase the risk of miscarriage^{5,7}. Quantitative studies indicate that the experience of miscarriage can negatively impact on men's and women's psychological wellbeing^{8,9}. To effectively reduce or prevent spontaneous miscarriages there is importance of assessing risk factors which are modifiable.

The purpose of study is to identify risk factors in patients came in OPD and in emergency with sign and symptoms of miscarriage. By identifying the risk factors, the efforts should be made to develop effective intervention plans and include pre conceptional period.

MATERIALS AND METHODS

This retrospective cross sectional study was carried out in the Department of Obstetrics & Gynaecology, Lady Willingdon Hospital Khairpur Medical College Khairpur Mirs from 1st January 2021 to 31st December 2022. Patients with incomplete data, congenital abnormal foetus and still birth were not included. Women diagnosed with any gynaecological problems e.g. fibroid, endometriosis, polycystic ovaries or H/o chorionic liver disease, diabetes mellitus, hypertension and metabolic disorders were excluded. The parameters analyzed were frequency, parity, risk factors of miscarriage like maternal age, lack of dietary intake supplements like folic acid and multi vitamins, overweight, previous

abortion, occupation requiring heavy lifting, marital problems physical abuse, smoking, death of close relative and caffeine intake. Statistical analysis was performed using SPSS-24.

RESULTS

The incidence was 22.6% that is 1 in 5 live births. The majority of patients were more than 35 years of age 874(41%), it was also noted that abortion was more common in multigravida 1215 (57%). Regarding the risk factors of abortion, 1735 (81.4%) had lack of history of taking folic acid and multivitamins. Thirty-five percent of women were overweight, 35% had history of infertility, 31.4% had a h/o occupation with heavy lifting, 20% had h/o previous abortion, 11% had marital problem, 3% had a history of physical abuse and 2% had a h/o of smoking Berri and Hukka (Tables 1-3)

Table 1: Frequency distribution of the patients age (n=2130)

Age (years)	No.	%
<25	660	31.0
25-35	596	28.0
>35	874	41.0

Table 2: Frequency distribution of parity (n=2130)

Parity	No.	%
Primigravida	383	18.0
2 nd to 4 th Gravida	1215	57.0
>4 th Gravida	532	25.0

Table 3: Frequency distribution of risk factors (n=2130)

Risk	No.	%
Lack of antenatal folic acid and multi vitamins	1735	81.4.0
Overweight	742	34.8
H/o infertility	729	34.2
Occupation requiring heavy lifting	669	31.4
H/o of previous abortion	435	20.4
Marital problems	234	11.0
Physical abuse	64	3.0
Smoking + Hukka	55	2.6
Death of close relative	34	1.6
H/o accidental trauma	17	0.8

DISCUSSION

Miscarriage defined as the natural death of a foetus before its ability to survive independently¹⁰. A study conducted in India showing prevalence of miscarriage relatively increased by 28% among Indian women¹¹. Another study conducted in Pakistan

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showing 17% clinically recognized pregnancies ending in loss^{12,13}. Our study showing incidence of 22.6% that is 1 in 5 live birth.

In our study miscarriage is more common after the age of 35 years. Another study also conducted in Pakistan showing the mean age of the patient of miscarriage was 34.6 years¹⁴. Another study conducted in India showing teenage pregnancies having higher risks of miscarriage, preterm birth, low birth weight and intrauterine growth retardation¹¹.

Our study showing abortion is more common in multigravida 57%. It is similar to another study conducted in Pakistan showing 78% were multiple Gravida¹⁴.

In our study regarding the risk factors, most of the patient lack of history of taking folic acid and multivitamins during antenatal period. Thirty-five percent women were overweight. This is similar to the study showing 44.8% of women were either overweight or obese^{10,15}.

This study showed that 34% had H/o infertility, 31.4% had a h/o occupation with heavy lifting, 20% had a history of previous abortion, 11% had a marital problem 3% had a h/o physical abuse and 2% had a H/o smoking Berri and Hukka. This study conducted in developing countries where most of the women not seeking advised for taking folic acid and multivitamins, these women also continued their occupation even heavy lifting during pregnancy. This reflects due to poor socioeconomic status, lacks of knowledge, illiteracy, marital problems are also common even physical abuse in our country. These risk factors contribute significantly for miscarriage. The provision of appropriate clinical information as well as supportive information can identify risk factors in a patients experiencing miscarriage is very much important because most of the risk factors are modifiable.

CONCLUSION

The risk factors of miscarriage include age of mother, lack of history of taking folic acid and multivitamins during antenatal period, increased body mass index and previous history of miscarriage physical abuse, history of infertility and h/o of smoking Berri and Hukka are significant. All these factors need to be considered while providing antenatal care to mothers to reduce the risk of miscarriage

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1. Conception and design of or acquisition of data or analysis and interpretation of data.
2. Drafting the manuscript or revising it critically for important intellectual content.
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