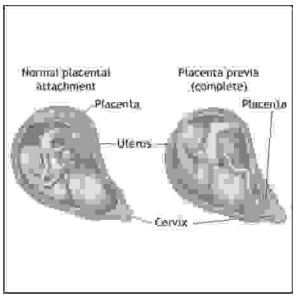
ORIGINAL PROF-1150

PLACENTA PRAEVIA;
A STUDY TO DETERMINE RESPONSIBLE FACTORS.



DR. ASLAM MAHMOOD MALIK
FCPS (Obstetric & Gynaecology)
Associate Professor of Obst. & Gynae.
Quaid-e-Azam Medical College &
Bahawal Victoria Hospital,
Bahawalpur

DR. SHAZIA SIDDIQUE, MBBS
Post Graduate Registrar
Obs & Gynae Unit-I
Bahawal Victoria Hospital,
Bahawalpur

DR. CAPT (R) IJAZ AHMAD SHAH, M.PHIL
Professor of Community Medicine
Quaid-e-Azam Medical College,
Bahawalpur

ABSTRACT... Objectives: To determine the factors suspected to be associated with placenta praevia. **Study Design:** It was a case control analytical study. **Setting:** Department of Obstetrics & Gynaecology Unit-I, Bahawal Victoria Hospital, Bahawalpur. **Duration of Study:** This study was conducted from 13th August 2004 to 12th February 2005. Material & Methods: 50 cases of placenta praevia was selected on the basis of ultrasonography from out patients, emergency and indoor patients. 250 controls were taken (50 for each variable i.e. age, parity, previous history of caesarean section, smoking and previous history of placenta previa) and were divided into 5 groups after matching. **Results:** The study revealed that placenta praevia was more prevalent in elderly patients (72%), grand multiparas (68%) in patient with history of previous caesarean deliveries (52%) and in patients who smoked (30%) but this study did not identify previous history of placenta praevia (44%) as a risk factor for subsequent pregnancies. **Conclusion:** It was concluded that maternal and fetal mortality can be reduced by identifying high risk patients (in whom any of above mentioned risk factors were present) and educating them for care about next pregnancy.

INTRODUCTION

Antepartum haemorrhage is one of the major causes of maternal and fetal morbidity and mortality. Placenta praevia is one of the most important causes of antepartum haemorrhage that occurs in second and third trimester of pregnancy. It is defined as "Implantation of placenta over or near the internal os of cervix"[1]. It occurs approximately 1 in 200 pregnancies[2]. Etiology of placenta praevia is unknown but various association have been identified. These are advanced maternal age, multiparity, previous history of caesarean section, previous history of placenta praevia, smoking, maternal

cocaine abuse and male sex of baby[3,4,5,6,7]. Threatened miscarriage in 2nd trimester may precede placenta praevia[8]. About 10% of patients of placenta praevia experience pain due to co existence of abruption[9]. This study was aimed to identify factors responsible for placenta praevia so that preventive measures can be applied by screening high risk population and educating them for subsequent pregnancies.

MATERIAL AND METHODS

Setting

Department of Obstetrics and Gynaecology Unit-I, Bahawal Victoria Hospital Bahawalpur.

Duration of Study

This study was conducted from 13th August 2004 to 12th February 2005.

Study Population

All pregnant women attending out patient department and emergency.

Sample Size

50 diagnosed cases of placenta praevia were selected on the basis of ultrasonography from out patients, emergency and indoor patients. A total 250 controls were taken(50 patients for each variable i.e. age, parity, previous history of caesarean section, smoking and previous history of placenta praevia) and divided into 5 groups after matching for demographic features(area of residence, socio-economic and educational status). Both cases and controls were matched for each variable except for the factor to be tested.

Sampling Technique

Convenient sampling technique was used for selection of study cases i.e. first 50 patients fulfilling the inclusion criteria and diagnosed cases of placenta praevia on Ultrasonography.

Inclusion Criteria

Pregnant women over 30th weeks of gestation diagnosed as case of placenta praevia coming for antenatal visits or in the emergency department or admitted in antenatal ward were included in this study.

Exclusion Criteria

1. All pregnant women presenting with bleeding per vaginum or low lying placenta before 30th weeks of gestation.
2. Antepartum haemorrhage due to abruptio placentae, Vasa praevia or any other local cause.
3. Pregnancy complicated with other medical disorders like diabetes mellitus.

Data Collection & Analysis

Data was collected through specially designed perfroma both from cases and controls after explaining and taking verbal consent. Test of significance used was CHI square.

RESULTS

The data showed most of the patients i.e. 36(72%) belonged to low socio-economic status, 32(66%) of cases were having no schooling while 38(76%) of patients were belonging to urban area.

Table I shows age analysis of study population giving a clear clue that patients of placenta praevia were mostly belonging to higher age group i.e. 36(72%) of cases v/s 12(24%) of controls. Table II shows relationship of parity with placenta praevia. Women with placenta praevia had increased parity i.e. more than 5 children was seen in 34(68%) of cases v/s 05(10%) controls. Calculated odds ratio was 16 meaning that patients having more than 5 children are 16 times at greater risk to suffer from placenta praevia. Previous history of caesarean was found in 26(52%) of cases and 12(24%) of controls (Table III). 15(30%) cases and 08(16%) were having history of smoking(Table IV).

Table V shows relation of previous history of placenta praevia in subsequent pregnancy, 22(44%) cases and 14(28%) controls were having history of Placenta Praevia.

Table-I. Group A : Age			
Age in years	**Cases**	**Control**	**Total**
35-40	36 (72%)	12 (24%)	48
20-30	14 (28%)	38 (76%)	52
Total	50	50	100
Chi square value : 5.43 at p < 0.05%.			

Table-II. Group B: Parity			
No. Of children	**Cases**	**Control**	**Total**
> 5	34 (68%)	05 (10%)	39
< 5	16 (32%)	45 (90%)	61
Total	50	50	100
Chi square value : 6.18 at p < 0.05%.			

Table-III. Group C: History of previous caesarean section			
History of previous C.S	**Cases**	**Controls**	**Total**
Yes	26 (52%)	12 (24%)	38
No	24 (48%)	38 (76%)	62
Total	50	50	100
Chi square value : 4.32 at p < 0.05%.			

Table-IV. Group E : Smoking			
History of smoking	**Cases**	**Control**	**Total**
Yes	15 (30%)	08 (16%)	23
No	35 (70%)	42 (84%)	77
Total	50	50	100
Chi square value : 3.19 at p < 0.05%.			

The difference between cases and controls as far as age, parity, history of previous caesarean section and smoking were concerned was found statistically significant while it was insignificant regarding previous history of placenta praevia.

The higher percentage in this study looks to be probably due to smaller sample size.

Table-V. Group D : Previous history of placenta praevia			
Previous history of placenta praevia	**Cases**	**Control**	**Total**
Yes	22 (44%)	14 (28%)	36
No	28 (56%)	36 (72%)	64
Total	50	50	100
Chi square value : 3.24 at p < 0.05%.			

DISCUSSION

The study provides an analysis that increasing maternal age is strongly associated with placenta praevia. Rasmussen-s[10] also found that increasing maternal age was associated with placenta praevia and incidence was lowest in women between 20-29 years of age. Similar results were obtained by Zhang T[7] and associates. Our study showed that increasing parity increases the risk of placenta praevia and the results are consistent with the study conducted by Babinszki[11] and collaborator according to which placenta praevia was 0.8% in multipara and 2.2% in grand multipara. Similarly a study carried out in USA concluded that women with previous caesarean birth and parity more than 3 were at increased risk of having a pregnancy complicated by placenta praevia[12].

Our study revealed that previous caesarean section is also strongly associated with placenta praevia. Caesarean section is the commonest operative intervention in modern obstetrics. The scar provide nidus for low placental implantation. According to Talor-VM and colleagues women with previous caesarean section are 50% more prone to have placenta praevia[13]. Our hypothesis that previous history of placenta praevia as a risk factor in subsequent pregnancies was proved but the difference was insignificant while Monica G showed that placenta praevia has a recurrence rate of 2.4% which is 8 fold high as compared to rate of placenta praevia among all births[5]. Our study showed significant relation

of maternal smoking with placenta praevia. Results are consistent with the study of William and colleagues who found 2 fold increase in occurrence of placenta praevia due to smoking. They theorized that carbon monoxide hypoxemia caused compensatory placental hypertrophy[14].

CONCLUSION

After analysis it was concluded that increase in maternal age and parity, previous caesarean section and smoking are significantly associated with the development of placenta praevia while previous history of placenta praevia did not prove to be statistically significant risk factor. Almost all of associated risk factors of placenta praevia are preventable, so preventive measures can be applied by screening high risk population and educating them for subsequent pregnancies to reduce maternal and perinatal mortality and morbidity.

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