

Original Article

Relation of Placenta Praevia with Previous Lower Segment Caesarean Section (LUCS) in our Clinical Practice

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Abstract:

Caesarean section (c-section) is one of the important risk factor to placenta praevia. There is significant association between placenta praevia and previous c-section pregnancy. It is a leading cause of APH and it affects approximately 0.5% of all labour. This cross sectional type of observational descriptive study based on non- probability technique was done in Faridpur Medical College Hospital from July 2015 - June 2016. A total of 150 pregnant women were studied. Pregnant women with H/O previous c-section once or more beyond 28 weeks gestation were included. Those who were primigravidae or pregnant women without previous c-section were excluded. The data were subjected to chi-square test with SPSS software version 20.0. In our study women with previous c-section were selected; out of which 16 patients (10.67%) were found to have placenta praevia and 134 patients (89.33%) were not found. The mean age of the study subject was 27.25 ± 3.43 years with maximum number of patients having age between 25 to 29 years. Among the study population other placental positions were anterofundal 90(60%) and posterofundal 44 (29.33%). The frequency of placenta praevia out of 16 women who had one c-section was 11 (10%), two c-section was 4 (11.4%) and three c-section was 1 (20%). There was significant association (p -value < 0.05) between number of c-section and placenta praevia. There was found significant relation between placenta praevia and lower segment caesarean section (LSCS) in our study.

Key words: Placenta praevia, Caesarean section.

Introduction:

Placenta praevia is initiated by implantation of the embryo in the lower uterine segment¹. The increased incidence of placenta praevia in the last decade may be the result of increasing caesarean delivery rates during this period or the more widespread use of ultrasonography for detecting placenta praevia²⁻⁴. The overall incidence of placenta praevia is 0.2-0.5% in western studies^{5,6}.

Ante partum hemorrhage is one of the most challenging obstetric complications encountered in pregnant

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women. The major causes of ante partum hemorrhage are placenta praevia and abruptio placenta. Placenta praevia complicates approximately 1 in 200 deliveries^{7,8} and is one of the leading causes of vaginal bleeding in the second and third trimesters.

This markedly increases risk for massive hemorrhage at the time of attempted placental removal and it is the most common indication for emergency hysterectomy. The maternal mortality may reach to 7% and surgically morbidities include massive transfusion, infection, urological injuries and fistula formation⁹.

The risk of placenta praevia in a pregnancy after a caesarean section delivery has been reported to be between 1.5 and 6 times higher than after a vaginal delivery¹⁰. The purpose of this study was to assess relationship between previous caesarean scar and subsequent development of placenta praevia.

Materials and Methods:

In this cross sectional study a total of 150 pregnant women with previous caesarean section were included. This study was conducted in Obstetrics and Gynaecology Department, Faridpur Medical College Hospital, Faridpur from July, 2015 to June 2016.

The study was started by taking approval of the study from the hospital ethical committee. All the women who were enrolled for the study were antenatal cases with previous caesarean scar, after 28 weeks of gestation whether booked or un-booked with or without bleeding per vagina, visiting OPD or admitted for delivery. All the patients were briefly described about the purpose of the study and informed written consent was taken. Cases having previous myomectomy, uterine repair, placental abruption, ante partum hemorrhage due to local cause were excluded. Demographic information regarding name, age, parity and history of C-section was taken from all the patients and were examined in supine lying position with empty urinary bladder. The placenta was observed in real time on grey scale imaging. If the placenta occupied an inferior position in the uterine cavity reaching, partially or completely covering the cervical os was labeled as placenta praevia. The collected information from all the patients was entered and analyzed by using SPSS v 20. Quantitative variables were presented in the form of mean and standard deviation and frequency and percentages were calculated for qualitative variables. Chi-square test was used to find association between qualitative variables. P-value < 0.05 was considered significant.

Result:

In this present study a total of 150 women were included, who presented with the history of previous caesarean delivery once or more. The mean age of the patients was 27.25 ± 3.43 years with maximum number of patients having age between 25 to 29 years. The distribution of placental localization showed that the frequency of placenta praevia in our study sample was noted to be 16 (10.67%) and 134 (89.33%) had no placenta praevia in patients who had caesarean section deliveries in previous pregnancies. In most of the patients the placental localization was anterofundal in 90 (60%) patients and 44 (29.33%) patients had posterofundal position (figure 1).

Distribution of placental localization

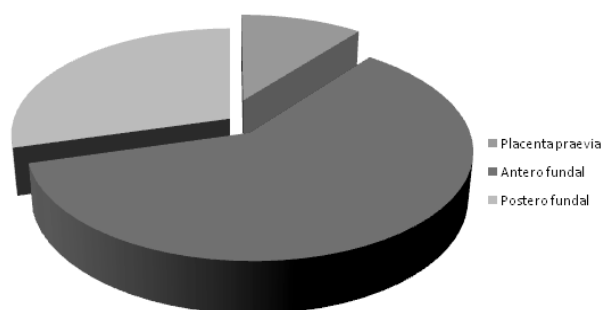


Fig.1: Distribution of placental localization.

There is increasing trend of placenta praevia with previous history of C-Section. When there is one previous caesarian section it is 10%, when previous caesarian section is 2 then it is 11.4% and when previous caesarian section is 3, it is 20% (Table I).

Table I: Frequency of Placenta Praevia with Previous Caesarean Section.

Previous caesarean sections	No. of cases	% age	Placenta Praevia	% of placenta praevia
One	110	73.33	11	10
Two	35	23.33	4	11.4
Three	5	3.33	1	20

Discussion:

Placenta Praevia is the partial or full attachment of placenta in lower uterine segment. The relationship of placenta praevia and number of previous caesarean section was assessed in this cross-sectional type of study. Many studies conducted around the world confirm a 2 to 5 fold increased risk of placenta praevia with previous history of c-section¹¹⁻¹³. Our study shows an increasing trend of placenta praevia with increasing number of previous caesarean scars. Ultrasonographic and peroperative findings were found similar in all cases in this study. Incidence of placenta praevia after one caesarean section was 10% which is much higher than that in a study of Clark and colleagues which showed 0.67%². It was confirmed that previous caesarean section increases the risk of placenta praevia and the risk is proportional to the number of previous uterine scars¹³. The study conducted by Nielson showed risk of placenta praevia 1.22% which is much less than our study¹. The results are also comparable to study of Cande which showed increased number of placenta praevia with increasing number of caesarean deliveries¹².

In our study percentage of placenta praevia with one prior caesarean section is 10% and with two prior caesarean sections is 11.4% which is similar to other studies. There was an increase in risk of placenta praevia with increasing number of caesarean section that is 3.5% with previous I, 22.5% with previous II, 28% with previous III, and 50% with previous IV c-sections¹³. Usta et al¹⁴ conducted study in 347 placenta praevia cases. One of the factors highly associated with Placenta praevia was previous CS, where the rate of PP increased with the number of previous caesarean sections. The risk for PP in patients with one CS was 8-fold higher compared with those with an unscarred uterus that is 1.9% with one prior caesarean section and 15.6% with two prior caesarean sections¹⁴.

Conclusion:

It can be concluded that in our study population the caesarean section had a significant relationship with placenta praevia and this risk becomes very high with escalation in number of caesarean sections. There is a strong association between previous LSCS and risk of subsequent development of placenta praevia. The study also reinforces the importance of advocating vaginal delivery as far as possible and reduces the number of LSCS and future placenta praevias. Women with previous LSCS scar are at high risk for developing placenta praevia in subsequent pregnancy.

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