

Frequency of placenta previa in pregnant women having prior cesarean section

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Abstract

Objective: To determine the frequency of placenta Previa, in cases with prior history of cesarean section.

Methodology: Study design: Cross sectional study. Setting: Department of Gynecology and Obstetrics, Sheikh Zayed hospital, Rahim Yar Khan. Duration of Study: 1st January to 31st December 2018. In present study, pregnant females with prior history of cesarean section were selected via non-probability, consecutive sampling between the age of 20 to 40 years. The cases with any other uterine surgery and those who were primigravida were excluded from this study. Placenta previa was labeled on the basis of USG, where placenta was found at an inferior position in the uterine cavity irrespective of its subtypes. Data was analyzed by SPSS version 21.

Results: In this study there were total 100 cases with prior cesarean section. The mean age was 31.35 ± 3.27 years and mean BMI was 25.13 ± 2.17 . Placenta previa was seen in 4 (4%) out of 100 cases. There was no significant difference of placenta previa with respect to gravida and parity. Placenta previa was more in cases with history of smoking affecting 1 (7.14%) cases vs 3 (3.48%) cases with no smoking in their respective groups with $p=0.11$. Placenta previa was significantly higher in cases with previous history of more than 1 cesarean section affecting 3 (7.50%) out of 40 cases with $p=0.01$.

Conclusion: Placenta previa is not so common in pregnancies after cesarean section but its number is significantly high in cases that had previous C-sections of more than one as compared to the single C-section.

Keywords: Placenta Previa, Cesarean section, Smoking

Introduction

Placenta previa is the partial or full attachment of placenta in lower uterine segment.¹ It usually takes place in second or third trimester but can be observed in early part of pregnancy as well. This complication is a primary cause of antepartum hemorrhage or vaginal bleeding.¹

The exact etiology of placenta previa remains hypothetical but some risk factors are considered to be associated with this ailment.^{2,3} The risk factors like higher age of mother, multi parity, and multiple gestations, history of abortion and placenta previa in previous pregnancy and smoking predispose to the development of this entity.^{2,3}

Placenta previa is a serious condition and can end up in catastrophic results to not only mother, as well as the fetus i.e. restraint in baby growth and preterm delivery, antenatal and intra partum hemorrhage etc.^{4,5} Uterine damage because of frequent pregnancies or surgical procedures like cesarean section are most detectable etiological factors found in singleton pregnancies. This incidence increases with increase in number of caesarean sections. The data has shown that the

risk increases in less than 1% with single cesarean section and more than ten percent with sections more than 4. For the diagnosis usually ultrasonography is used and sometimes magnetic resonance imaging is also added.⁶

According to a study the placenta previa was seen in 21.5% of cases after cesarean section,⁷ while in another study done in Iran revealed it only in 3.68% of the cases.⁸ On the other hand in another study conducted, none of their cases after first cesarean section had this.⁹

The data is lacking in the developing countries especially in the resource depleted areas and Southern Punjab, for which this study was planned. The objective of this study was to determine the frequency of placenta previa, in cases with prior history of previous cesarean section.

Methodology

This was a cross sectional study that was conducted at Department of Gynecology and obstetrics, Sheikh Zayed Hospital, Rahim Yar Khan from 1st January to 31st December 2018. In present study the pregnant females with prior history of cesarean section were selected via non-probability, consecutive sampling

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between the age of 20 to 40 years. The cases with any other uterine surgery and those who were primigravida were excluded from this study. Placenta previa was labeled on the basis of USG, where placenta was found at an inferior position in the uterine cavity irrespective of its subtypes.

The data was assessed by using SPSS version 21.0. Chi square test was used for data analysis and post stratification p value of equal or less than 0.05 was considered as significant.

Results

In this study, there were total 100 cases with prior cesarean section. The mean age was 31.35 ± 3.27 years and mean BMI was 25.13 ± 2.17 as in table I. Placenta previa was seen in 4 (4%) out of 100 cases as shown in Figure I. There was no significant difference of placenta previa with respect to gravida and parity. Placenta previa was more in cases with history of smoking affecting 1 (7.14%) cases vs 3 (3.48%) cases with no smoking in their respective groups with $p = 0.11$. Placenta previa was significantly higher in cases with previous history of more than 1 cesarean sections affecting 3 (7.50%) out of 40 cases with $p = 0.01$ as in table II.

Variables	Mean \pm SD	Range
Age	31.35 ± 3.27	20-39
BMI (kg/m^2)	25.13 ± 2.17	19-32
Gravida	4.31 ± 1.31	1-8
Parity	3.45 ± 1.13	1-6

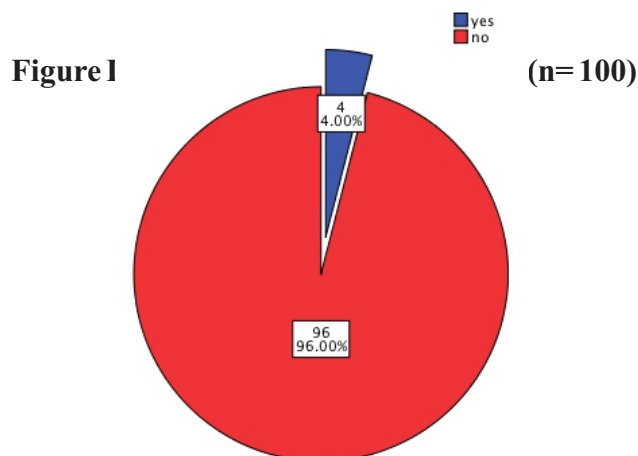


Table II: Placenta previa versus Study variables (n= 100)

Variables		Placenta previa		p value
		Yes	No	
Gravida	Single	0 (0%)	12 (100%)	0.45
	Multi	4 (4.45%)	84 (95.55%)	
Parity	Single	0 (0%)	12 (100%)	0.45
	multiparous	4 (4.45%)	84 (95.55%)	
Smoking	Yes	1 (7.14%)	13 (92.86%)	0.11
	No	3 (3.48%)	83 (96.52%)	
ceserean section	Single	1 (1.67%)	59 (98.33%)	0.01
	>1	3 (7.50%)	37 (92.50%)	

Discussion

Placenta previa was seen in 4 (4%) out of 100 cases with previous history of C- section. Placenta previa was significantly higher in cases with previous history of more than 1 cesarean sections affecting 3 (7.50%) out of 40 cases with $p = 0.01$. The data has also revealed in various studies that the placenta previa is more common in cases with prior cesarean section.¹⁰⁻¹² This can be attributed to the scar site serving as a nidus for implantation. It is also found in the past that there was linear and significant association between the number of previous cesarean sections and the risk of developing placenta previa. The data from the past has shown that the proportion of the risk for development of placenta previa, after 1st, 2nd and 3rd cesarean section increases the risk by 2.2, 4.1, and 24 times as compared to the cases with no prior history of C section. According to another analysis the risk after 1st cesarean section was 1.9%, after the 2nd was 15.6%, after 3rd as 23.5%, 4th as 29.4%, 5th as 33.3% and 50% with more than this.¹⁰⁻¹²

There was no significant difference of placenta previa with respect to gravida and parity for which, there was variable data in the past. Both these modalities along with history of abortion reveal an underlying same mechanisms with intervention over the uterine walls either in the form of recurrent or single abortion in the form of dilation and curettage or multiple deliveries which can also be carried out through cesarean section which is found an independent risk factor for development of the placenta previa.¹³⁻¹⁵ According to a study carried out by Nasreen F,¹¹ it was observed that very high incidence of placenta previa was seen in cases that had history of abortion and in other studies it was

seen in as high as 36% of the cases,¹³ 35.5%¹⁴ and 37%¹⁵. The data regarding the number of abortions in the present study was lacking.

There was no significant difference in terms of smoking and it was seen in 7.14% in smokers and 3.48% in non-smokers with $p=0.11$. This was also seen by other studies as well that also did not reveal any significant chance of placenta previa in cases of smoking although the number was high in such groups but the difference was not statistically significant.¹⁵⁻¹⁶ The reason of non significant difference in our study and the others of the local vicinity can be explained by the factor that the rate of smoking is low in our population due to our customs and secondly even if they smoke, the rate is far less to develop such complications.

CONCLUSION

Placenta previa is not so common in pregnancies after cesarean section but its number is significantly high in cases that had previous history of cesarean sections of more than one as compared to the single previous cesarean section.

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