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Faculty of Basic Medical Science**



Frequency of Placenta Previa in Women with History of Previous Caesarean and Normal Vaginal Deliveries

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Abstract

Placenta previa is known to be associated with previous caesarean deliveries, advanced maternal age, increasing parity, smoking and myomectomy. This study was conducted to compare placenta previa incidence in women with previous Caesareans relative to those with normal vaginal deliveries. And also determine if multiple previous caesarean sections in subsequent deliveries would be associated with a higher placenta previa level than in women with a single previous caesarean section.

Introduction

The placenta is an organ that develops in the uterus during pregnancy, provides oxygen and nutrients as the baby develops and remove waste products from the baby's blood. Placenta previa is defined as placenta lying entirely or in part in the lower uterine segment.⁽³⁾

Cesarean section is the surgical delivery of baby by an incision through the mother's abdomen and Uterus. This procedure is done when it is determined to be a safer method than a vaginal delivery for the mother, baby or both.⁽⁴⁾ Advancing maternal age, multiparity, miscarriages, uterine curettage, cocaine use, smoking and previous history of placenta previa have all been attributed as risk factors for placenta previa.⁽⁵⁾ The most common identifiable aetiological factor is previous uterine damage due to repeated pregnancies or surgical procedures. This endometrial damage predisposes to abnormal placentation.

Most of the studies show increase in the frequency of placenta previa with increasing number of caesareans. Some studies, however, show no increased risk of placenta previa with previous caesarean deliveries. Mortality and morbidity from placenta previa is considerable. Maternal complications include; Antepartum and postpartum hemorrhages, hysterectomy, blood transfusions, septicaemia and Thrombophlebitis. Fetal complications are higher frequencies of congenital malformations.⁽⁵⁾

This study was to see the frequency of placenta previa in women presenting at Gynecology unit B, of Ayub Teaching Hospital, Abbottabad at term and its relationship with previous cesarean sections.⁽¹⁾

Aim of the study

This study was carried out to compare the frequency of placenta previa, in women with previous cesarean sections those with normal vaginal deliveries, and to identification of risk factor, the fetomaternal Out-come and complications of women having placenta previa with previous cesarean section. .⁽⁴⁾

Material and methods

It was one year study conducted at the Department of Obstetrics and Gynecology Unit B, Ayub Teaching Hospital, Abbottabad 2012. One hundred women were included in the study, 50 in Group A with previous caesarean deliveries, and 50 in Group B with previous normal vaginal deliveries.⁽¹⁾ Frequency of placenta previa in both groups was analyzed.⁽¹⁾ . Both groups were matched for age and parity and smoking status taking care of the confounders .Women with history of previous miscarriages , myomectomy, dilatation and curettage were excluded from the study.⁽⁵⁾

Placental localisation was done with full bladder on transabdominal ultrasound. Placental edge 5cm or less from internal cervical os, but not reaching the os, was labelled as Grade I. Placental edge reaching, but not covering the os was labelled as Grade II; Placental edge covering the internal os partially, or asymmetrically was labelled as Grade III; and placenta covering os symmetrically wholly was labelled as Grade IV.⁽⁵⁾

Results

In Group A, one case of placenta previa was found in one of the 50 patients with previous caesarean section. There were two instances of placenta previa in women

who had no previous caesarean section (Group B), There were no major differences between the two groups ($p=0.55$) (Table-1).⁽⁵⁾

No placenta previa was seen in patients with a single previous caesarean section (35). There was one placenta previa in 15 patients with more than 1 previous caesarean section (Table-2).⁽¹⁾ The only case in Group A was para 7 and the cases of placenta previa in Group B were 1 each of para 4 and para 5 (Table-3).⁽¹⁾ The case in Group A was in age group 36–40 years, and the two patients with placenta previa in Group B were aged between 26 and 35 years (Table-4).⁽⁵⁾

Table-1: Distribution of placenta previa in Groups [n (%)]

Group	Placenta previa	No. Placenta Previa	<i>P</i>
A	1 (2)	49 (98)	0.55
0B	2 (4)	48(96)	0.55

Table-2: Frequency of placenta previa in relationship with caesarean section

Previous C- Sections	Total Patients	Placenta previa
1	35	0
>1	15	1
Total	50	1

Table-3: Frequency of placenta previa in relationship with parity

Parity	Group A		Group B	
	Patients	Frequency	Patients	Frequency
P1	22	0	22	0
P2	14	0	14	0
P3	6	0	6	0

P4	2	0	2	1
P5	5	0	5	1
P6	0	0	0	0
P7	1	1	1	0
Total	50	1	50	2

Table-4: Frequency of placenta previa in relationship with age groups

Age Group	Group A		Group B	
	Patients	Frequency	Patients	Frequency
21–25Year	11	0	11	0
26–30Year	27	0	27	1
31–35Year	11	0	11	1
36–40Year	1	1	1	0
Total	50	1	50	2

Discussion

Their study showed that frequency of placenta previa did not increase with a single previous caesarean section.⁽¹⁾ Hossain et al reported that the previous one caesarean section did not increase the likelihood of placenta previa development during subsequent pregnancy. They found association of placenta previa with increasing parity and advanced maternal age. Cieminski et al have reported similar results.⁽⁵⁾

A meta-analysis by Faiz et al found that pregnancy advances in maternal age, multiparity, previous delivery and abortion, smoking and cocaine use, increased risk of placenta previa. Another meta-analysis by Ananth CV found increased risk of placenta previa with increasing number of deliveries caesarans.⁽⁵⁾ Because of the comparatively shorter duration of the current study, the number of patients was not sufficient to determine the effect of increasing numbers of caesarean sections on placenta previa growth.⁽⁵⁾

Even in that case, their observed placenta previa for one woman with two previous scars compared to none with one previous scar, indicating that with an increasing number of caesareans in the dose response model, there may be an increased risk.⁽¹⁾

A study by Zaman et al their observation of increased incidence of placenta previa with increased parity and advancing maternal age has been confirmed. Nonetheless, they do, found increased risk of placenta previa with previous caesarean sections. Another study by Zamani reported an increased incidence With age and advancing parity supporting our observations. They also found increased risk for placenta previa even with previous single caesarean section.⁽⁵⁾

There is another study by Gilliam et al, like our stud, found an increased risk of placenta previa with increasing parity. However they also found an increased risk of placenta previa with previous single scar. unlike our results, reported by Getahun et al found that caesarean first birth was associated with increased risks of placenta previa and abruption in the second pregnancy. They found a dose response pattern with an increasing number of caesarean deliveries for the risk of placenta previa.⁽⁵⁾

Conclusion

Previous one caesarean section did not increase the frequency of placenta previa compared to previous normal vaginal deliveries.⁽¹⁾ Increasing number of caesarean sections leads to increased risk of placenta previa. Increasing number of scars, increasing maternal age above 25 years and increasing parity above 4 are associated with development of low lying placenta (placenta previa).⁽⁵⁾

‘References’

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