

## Original Article

## PERVIOUS CESAREAN BIRTH: A RISK FACTOR FOR PLACENTA PREVIA?

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**Objective:** To compare the risk of Placenta Previa among women who had a pervious cesarean section with women who delivered vaginally.

**Material and Methods:** Retrospective cohort study. Study analysed available data from department of Obstetrics & Gynecology Fatima Memorial Hospital Lahore. Two Years, July 2010 to July 2012.

**Results:** Total 56 patients with all types of Placenta Previa were included in the study. Mostly patients were between 26-30 years age. Twenty patients were after normal delivery and 36 were after lower segment caesarean section.

**Conclusion:** There is an increased risk of Placenta Previa in the subsequent pregnancy after lower segment caesarean section as compared to a normal vaginal delivery.

**Key words:** Placenta Previa, lower segment caesarean section, hemorrhage.

### Introduction

The placenta is an organ which provides the fetus with oxygen and nutrients and takes away wastes such as carbon dioxide via the umbilical cord. It is said to be previa if it is abnormally implanted over or near the internal cervical os. It remains one of the leading causes of major obstetric hemorrhage which is the most common cause of maternal mortality and morbidity and is a risk factor for various maternal complications.<sup>1</sup> Overall prevalence rate for placenta previa is about 4 per 1000 live births<sup>2</sup> and varies with parity. For nulliparous it is 0.2% while for grand multiparous it is 5%. Incidence of hysterectomy after caesarean section for placenta previa is 5.3%.<sup>3</sup> Perinatal mortality rates are 3 to 4 times higher than in normal pregnancies.<sup>4,5</sup> Risk factors for placenta previa include prior caesarean delivery, pregnancy termination, intrauterine surgery, smoking, multifetal gestation, increasing parity and maternal age.<sup>6</sup>

The usual presentation is painless vaginal bleeding. Transvaginal ultrasound is preferred method for accurate localization of a low lying placenta and 60% of women who undergo transabdominal ultrasound may have re-classification of placental position when they undergo transvaginal ultrasound.<sup>7-10</sup> It has positive predictive value of 93.3% making it gold standard for diagnosis of placenta previa.<sup>11</sup> The maternal complications of placenta previa include major haemorrhage, shock and DIC, renal failure, placenta previa accreta, anaemia, infection and maternal mortality while the fetal complications include prematurity and risk of fetal anaemia.

Placenta previa can have serious consequences most

important one being abnormal placental growth into the uterus which can result in morbidly adherent placenta which maybe placenta accreta, increta or percreta and is associated with severe maternal morbidity. Its increased incidence in recent years is due to increase in the caesarean section rates.<sup>12,13</sup> With one previous caesarean section risk of placenta accrete is 25% while for previous two caesarean sections it is 40%.<sup>14,15</sup> Hence placenta previa is one of the leading causes of major maternal mortality and morbidity and requires proper clinical and ultrasound diagnosis to decrease incidence of major maternal as well as fetal complications.

### Material and Methods

Retrospective cohort study. Study analyzed available data from department of Obstetrics & Gynecology Fatima Memorial Hospital Lahore. Two years, July 2010 to July 2012.

### Results

Total 56 patients with all types of Placenta Previa were included in the study. Mostly patients were between 26-30 years age. Twenty patients were after normal delivery and 36 were after lower segment caesarean section. As in our study 64% of the patients with placenta previa have previous lower segment caesarean section. Maximum no. of cases of Placenta Previa are reported after previous I and Previous II lower segment caesarean section i.e. 35.7% and 30.35% respectively. Our study has demonstrated that in addition to women with previous caesarean section, women with advanced maternal age, women with birth interval less than 1 year and women who had a

developing placenta previa.

**Table-1:** Distribution of cases according to pervious cesarean ratio.

Previous Cesarean Section	No. Of Patients	Percentage
Yes	36	64.2
No	20	35.7
Total	56	1000

**Table-2:** Distribution of cases according to pervious Placenta Previa.

Previous Placenta Previa	No. Of Patients	Percentage
Yes	31	55.35
No	25	44.6
Total	56	1000

**Table-3:** Distribution of cases according to maternal age.

Maternal Age	No. Of Patients	Percentage
< 20	09	16.07
20 - 29	14	25
To30 - 39al	31	55.35
> 40	02	3.571
Total	56	1000

**Table-4:** Distribution of cases according to inter-birth interval.

Inter-Birth Internal	No. Of Patients	Percentage
< 1 Year	26	46.4
1 - 2	08	14.2
2 - 3	05	8.9
3 - 4	04	7.14
>3	13	23.2
Total	56	1000

**Table-5:** Distribution of cases according to No. of Previous Lower Segment Cesarean Section.

No. Of Previous Cesarean Section	No. Of Patients	%Age
Previous -I	10	17.85
Previous II	20	35.71
Previous III	17	30.35
Previous IV	09	16.07
Total	56	100

## Discussion

There is an increased risk of placenta previa and its complications with the rise in the rate of cesarean section worldwide. Cesarean section in previous delivery increased the risk of placenta previa in subsequent delivery by 60%.<sup>16</sup>

The risk of placenta previa is also increased by previous placenta previa, advanced maternal age and with birth interval less than one year or more than four years. Women who had placenta previa in the previous pregnancy were at a greatest risk of placenta previa in a current pregnancy but less than 5 in 100 of women with previous placenta previa were expected. Clinicians should consider and communicate these factors when counseling their patients.

## Conclusion

Cesarean section ratio rising worldwide and an increase in the long term complications of cesarean section should be anticipated. There is a need for better understanding of the relative risk associated with vaginal and cesarean births to support decision making by the mothers and clinicians. Women with a prior cesarean section should have placental localization in current pregnancy to exclude placenta previa. If placenta previa is diagnosed, there must be further investigations to exclude placenta accrete, a potentially life threatening condition. Maternal prognosis with placenta previa is good when managed properly. This is done by managing patients in tertiary care hospitals, hospitalizing those at risk who are exhibiting symptoms and signs, appropriate ultrasound diagnosis and subsequent counseling, prehand arrangement of blood and blood products and performing delivery by cesarean section. There should be effort to decrease the rising caesarean section rate and all patients with history of previous one caesarean section should be encouraged for VBAC.

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