

## MULTIPLE CAESAREAN SECTIONS – AN ASSOCIATION WITH INCREASING FREQUENCY OF PLACENTA PRAEVIA

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### ABSTRACT

*This study was conducted to look for risk factor for placenta praevia particularly the increasing frequency of placenta praevia in patients with multiple caesarean sections and their complications. The place of this work was obstetrics and gynaecology Unit of Mola Buksh Teaching Hospital of Sargodha Medical College. The duration of study was 1 year from first June 2007 to 31<sup>st</sup> May 2008. Sixty patients with placenta praevia included in the study. Forty patients (67%) had major degree placenta praevia, 14 (23.3%) had history of previous caesarean section. Seven patients (11%) had severe PPH, out of which three, had hysterectomy due to morbidly adherent placenta. They had previous history of multiple caesarean sections. It was concluded that there is an increasing frequency of placenta praevia in patients with previous history of caesarean sections.*

### INTRODUCTION

When placenta is partly or completely implanted in lower segment, it is called placenta praevia<sup>1</sup>. The risk of having placenta praevia is increased with high gravidity, high parity, and previous caesarean sections<sup>2</sup>. It is associated with antepartum, intrapartum, postpartum complication as well as the risks of massive blood transfusions, septicaemia and hysterectomy<sup>3</sup>.

The neonatal complication due to placenta praevia include preterm birth, low apgar score, RDS, anaemia, neonatal death. Dexamethasone facilitate fetal lung maturation.<sup>4,5</sup>

This study was done to look for risk factor for placenta praevia particularly, the increasing frequency of placenta praevia in patients with multiple caesarean sections and its fetomaternal complication.

### PATIENTS & METHODS

This was descriptive study carried in obstetrics & gynaecology department of Mola Buksh Teaching Hospital, Sargodha Medical College for a period of one year from first June 2007 to 31<sup>st</sup> May, 2008. Sixty patients of placenta praevia (diagnosed on ultrasound scan) were included in study. Convenient non-probability sample technique was used.

#### Inclusion Criteria

- Pregnant patients diagnosed as placenta praevia after 24 weeks of gestation with or without vaginal bleeding.

#### Exclusion Criteria

- Placental abruption

- Multiple gestation.

#### Methodology

Sixty patients fulfilling the inclusion criteria identified either through OPD or causality. Detailed history taken, including, gravity, parity, number of abortion, LMP, duration of pregnancy and EDD. Most of the patients presented with painless vaginal bleeding. The amount of colour and time of onset of vaginal bleeding, number of episode of bleeding noted.

History of previous caesarean section, D&C, termination of pregnancy, contraception, smoking was also enquired. General physical examination performed. Abdominal examination done to assess, fundal height, lie, FHR, tenderness, uterine contraction and previous scar. Vaginal examination was not performed.

Patients were either managed actively or expectant. Patient's blood group, blood sugar level, Hb%, hepatitis screening ordered. Patient suffering from severe haemorrhage were actively managed and delivered by abdominal route. Gestational age not taken into account. Mild to moderate case of APH were admitted for maternal and fetal surveillance. They were managed expectantly till 38 week. Anaemia corrected, steroid given where indicated. An elective caesarean section was planned at 38 completed weeks. Early intervention done due to onset of labour pain, more than two episode of vaginal bleeding. All cases were delivered by caesarean section. Patients were observed for PPH.

Hysterectomy was carried out in severe PPH, due to abnormally adherent placenta. Babies were attended by pediatrician.

**RESULTS**

The mean maternal age was 28.2±4.8 year (ranging 20-40 yr). The mean parity was 3±1.7. 27(45%) patients had parity in the range of 1-4. While 24(40%) women were P<sub>5</sub> or above and only 9(15%) were primigravida. Majority of the patients 49 (82%) were un-booked while only 11(18%) of patients were booked. The warning haemorrhage occurred at mean gestational age of 32±9 weeks. This study showed that first bleeding occurred between 33-36 weeks in 29 patients (48%).

Majority of patients had major degree placenta praevia (Table 1).

**Table 1:**

Degree of Placenta Praevia	Frequency of Patients	Percentage
Major Degree	40	67.0%
Minor Degree	20	33.0%
Total	60	100.00%

Table 2 shows that 37 patients (61.6%) women were actively and delivered by abdominal route while 23 (38.4%) received expectant management. During the expectant management 6 patients started bleeding heavily and emergency caesarean section was performed.

**Table 2:**

Management Planm	Frequency of Patients	Percentage
Active Management	37	61.6%
Expectant Management	23	38.4%
Total	60	100.00%

**Table 3: Maternal haemoglobin at Diagnosis of placenta praevia.**

Haemoglobin g/dl	Frequency of Patients	Percentage
<10.5 g/dl	50	83.3%
10.5 – 11.9 g/dl	9	15.0%
12 or above	1	1.7%
Total	60	100.00%

Majority of women 50(83.3%) were anaemic. They had haemoglobin level below 10.5 gm/dl (Table 3).

**Table 4: Blood transfusion required to patients.**

Units transfused	Frequency of Patients	Percentage
No transfusion	4	6.7%
1 – 3	36	60.0%
4 – 6	17	28.3%
> 6	3	5.0%
Total	60	100.00%

36 patients (60%) required 1-3 pint of blood transfusion to correct anaemia while 3 (5%) patients required more than 6 pint of blood during antenatal / post partum period.

**Table 5: Maternal characteristics with placenta praevia.**

Maternal Characteristics	No. of patients	Percentage
Previous Caesarean section	14	23.3%
D&C	16	26.6%
Smoking	0	0
Nulliparous	9	15
Multiparous	51	85%
Maternal age	28.3 + 4.8 yr	
Parity	3 + 1.7	

14 (23.3%) patients had previous history of caesarean section and diagnostic D&C in 16 patients (Table 5). 14 patients presented haemorrhagic shock, so before going to any specific treatment plan, they required resuscitation and blood transfusion.

**Table 6: Maternal complication with placenta praevia.**

Complications	Number of patients	Percentage
Haemorrhagic shock	14	23%
PPH	7	11%
Abnormally adherent placenta	3	5%

The postpartum haemorrhage is known complication and 7 (11%) patients suffered. They were

actively managed and out of 7 patients, 3 (5%) had abnormally adherent placenta for which peripartum hysterectomy done. There was no maternal mortality (Table 6).

Full term babies were 37 (62%) and 23 (38%) were preterm. The mean birth weight was  $2.6 \pm 0.53$ kg.

Maximum number of babies 45 (67%) were between 2.5-3.5 kg. 27 (45%) required neonatal intensive care unit (NICU) admission. Out of these 7 (11.0%) babies suffered from RDS, while 11 babies were premature, 9 (24.3%) had low birth weight. After one week follow up 16 (37%) babies were discharged and 5 admitted recovered, 2 babies expired.

## DISCUSSION

Placenta praevia is a common obstetrical problem associated with considerable maternal & fetal morbidity and mortality. The mean age of studied patient was  $28.2 \pm 4.8$  years. This is lower than mean maternal age of 31.3 years reported in old study<sup>6</sup>. In this study the mean gestational age for warning haemorrhage is 32 weeks which is quite low from result of McShan<sup>7</sup>.

Caesarean section is the mode of choice for delivery in case of major degree placenta praevia.<sup>8,9</sup>

14 (23.3%) patients had previous history of caesarean section and diagnostic D&C in 16 patients. 14 patients presented with haemorrhagic shock before going to specific treatment. They required resuscitation and blood transfusion. Caesarean section is the choice of delivery in major degree placenta praevia.

PPH is important complication of placenta praevia due to inadequate occlusion of sinuses in lower uterine segment following the delivery. The combination of caesarean section and placenta praevia is especially ominous risk factor for emergency postpartum hysterectomy and life threatening bleeding following the placental removed.<sup>10,11</sup>

7 (11%) patient had severe PPH, out of which 3 (5%) had hysterectomy due to morbidly adherent placenta. They also had previous history of multiple caesarean sections. Combination of previous Caesarean section and placenta praevia is most important cause of peripartum hysterectomy as reported by Miller.<sup>12,13,14</sup> The preterm birth lead to RDS and low birth weight comparable finding by silver.<sup>15</sup> The main cause of perinatal mortality was prematurity. So, early diagnosis, recognition of risk factor, expectant management could improve the maternal and fetal outcome.<sup>16,17</sup>

## CONCLUSION

It is **concluded** that early diagnosis of placenta praevia, identification of risk factor such as previous caesarean section, D&C, smoking, multiparity, malpresentation, expectant management and adequate availability of blood may help in better outcome by reducing the fetomaternal complications.

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