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Original Research Article

AN OBSERVATIONAL STUDY OF PRIMARY CAESAREAN SECTION & THEIR OUTCOMES IN MULTI-PAROUS WOMEN

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Abstract

Background: The most frequently performed life-saving operative procedure in women & newborns is the Caesarean section. Maternal & fetal complications can be minimized by awareness of the need for caesarean section in multi-parous women.
Aim & objective: To study the indication, maternal & fetal outcome in primary caesarean in multi-parous women.
Methodology: The present research was a prospective study performed on multi-parous women who had undergone caesarean section for the first time in prior pregnancies who had delivered vaginally. Data was obtained using a pre-tested questionnaire. Demographic data, clinical history & clinical analysis were included in the data.
Results: The majority of patients were 21-25 years of age (53 percent), followed by 26-30 years of age (28 percent). Second gravida (57 percent) was the bulk of the patients, followed by third gravida (28 percent). Fetal distress (19 %) accompanied by mal-presentations (14%) & oligo-hydramnios was the most common sign for the caesarean section (14 percent). Atonic postpartum haemorrhage (PPH), which was seen in 7 percent of patients, was the most frequently observed complication.
Conclusion: Early recognition of complications in multi-para & proper management including caesarean section will improve maternal & fetal outcome.
Keyword: multi-parous women, primary caesarean section, postpartum haemorrhage.

Introduction

In obstetrics, caesarean section surgery is regularly performed. In recent years, as medical science and particularly obstetrics have developed, there has been a parallel and steady rise in the rate of caesarean births[1,2]. Primary caesarean section means the first caesarean section performed in patients who have undergone one or more vaginal deliveries. Multipara refers to a woman have given birth to a child at least once. Grand-multipara means a woman who has given birth to children in excess of or equal to 5. Dr. Bethal Soloman (1934) coined the word "Dangerous multipara" & Feency et al. The term "Unpredictable multipara" was prepared by Dr. Bethal Soloman (1934) for dangerous complications[3,4]. Even if they have delivered a full-term child vaginally, Multi-para can still have cephalo-pelvic disproportion. During the antenatal period & intra-natal period, multi-para is vulnerable to multiple complications. Abortion, pre-eclampsia, ante-partum hemorrhage, multiple pregnancies & poly-hydroamnios are ante-natal complications[5,6]. Some medical conditions such as anaemia, hypertension, diabetes mellitus & cardio vascular disorders are also associated with it. Mal-presentation, cephalo-pelvic disproportion, uterine inertia, ruptured uterus, retained placenta & postpartum haemorrhage are intra-partum complications. All of these complications may be suggestive of the caesarean section, so multipara should be considered for these signs[7]. Due to the availability of antibiotics, blood & blood products, enhanced surgical & anesthetic procedures, the Caesaerean surgeries are better. Reduced maternal & peri-natal morbidity & mortality are correlated with it[8,9].

Aims & objectives: Present study was conducted to study the indication, maternal & fetal outcome in primary caesarean section in multi-parous women.

Material & Methods

Present study was a prospective study carried out at tertiary health care centre for 3 years. Study population was 200 Multi-parous women who underwent caesarean section for the first time who had delivered vaginally in previous pregnancies.

Inclusion Criteria: 1. All multigravida with pregnancy of > 28 wks gestation (gravida 2 & above), each of whom has had a previous vaginal delivery of >20 wks. 2. Patients willing to participate in the study.

Exclusion Criteria:

1. Women with previous abortions & previous caesarean sections

2. Women with previous uterine surgery

3. Women with previous hysterotomy

The research was accepted by the institute's ethical committee. After describing the research to them, valid written consent was obtained from the patients. Data was obtained using a pre-tested questionnaire. Interviewed were patients presenting directly to the delivery room at different stages of labor as well as those admitted to the prenatal

wards for various high-risk factors & taken up for elective caesarean section. With relation to present pregnancy & obstetric history, comprehensive history was taken. A clinical review, including a pelvic examination, was carried out. Basic investigations & ultrasonography is done by all patients. Caesarean delivery signs, color of liquor, puerperium; baby weight noted. Maternal & foetal findings have been published. Statistical analysis of data was conducted using the Social Sciences Statistical Kit (SPSS v 21.0, IBM).

Results

Majority of the patients were from the age group of 21-25 years (53 %) followed by 26-30 years (28 %). Patients in the age group of 15-20 years were 12 %. Patients above age of 30 years were 7 %.

Table 1: Distribution of patients according to age group

Sr no	Age group (years)	No of patients	Percentage
1	15- 20	24	12 %
2	21- 25	106	53 %
3	26- 30	56	28 %
4	>30	14	7 %
5	Total	200	100 %

Table 2 shows distribution of patients according to gravida. Majority of the patients were second gravida (57 %) followed by third gravida (28 %). Patients with gravida 4 were 11 % & patients with 5 or above were 4 %.

Table 2: Distribution of patients according to gravida

Sr no	Gravida	No of patients	Percentage
1	2	114	57 %
2	3	56	28 %
3	4	22	11 %
4	≥ 5	08	4 %
5	Total	200	100 %

In our study, majority of the patients were operated in the gestational age of 37-40 weeks (63 %) followed by patients with gestational age above 40 weeks (27 %). Patients with gestational age 34-36 weeks & 32-34 weeks were 7 % & 3 % respectively.

Table 3: Distribution of patients according to gestational age

Sr no	Gestational age	No of patients	Percentage
1	32- 34 wks	06	3 %
2	34- 36 wks	14	7 %
3	37- 40 wks	126	63 %
4	Post dated (> 40 wks)	54	27 %
5	Total	200	100 %

Out of 200 patients 93 % patients were given trial of labor & they needed caesarean section remaining 7 % patient undergone elective caesarean section. Table 4 shows indications for caesarean section in our study. Most common indication for caesarean section in our study was fetal distress (19 %) followed by mal-presentations (14 %) & oligo-hydramnios (14 %). CPD (cephalo-pelvic disproportion) & PROM (Premature Rupture of Membrane) with failed induction were the indications in 13 % patients each. Other indications were obstructed labour (9 %), severe PIH (6 %), BOH in previous pregnancy (6 %), twins (3 %), placenta previa (2 %) & abruption placenta (1 %). Intra operative findings were meconium stained liquor, post-partum hemorrhage, thinned out lower segment & extension of incision.

Table 4: Distribution of patients according to indications for caesarean section

Sr. No	Indications for caesarean section	Percentage
1	Foetal distress	19 %
2	Malpresentations	14 %
3	Oligohydramnios	14 %
4	CPD (cephalo pelvic disproportion)	13 %
5	PROM with failed induction	13 %
6	Obstructed labour (9%)	9 %
7	Severe PIH	6 %
8	BOH in previous pregnancy	6 %
9	Twins	3 %
10	Placenta previa	2 %
11	Abruption placenta	1 %

Out of 200 patients, 84 patients needed intra-operative or immediate post-operative blood transfusion. We studied maternal outcome in terms of complications during or after casaerean section. Out of total 100 patients, 84 % patients were healthy post operatively. Most commonly observed complication was atonic PPH which was observed in 7 % patients. Puerperal pyrexia was observed among 5 % patients. Wound gaping & Urinary Tract Infection was observed in 2 % patients each. No maternal death was observed in our study. We studied the fetal outcome. Out of 200 patients, 6 patients gave birth to twins. There were 4 still births. Two of the still births were in patient of abruptio placenta & others in patients with obstructed labor.

Table 5: Distribution of patients according to maternal outcome

Sr. No	Maternal outcome	Percentage
1	Healthy	84 %
2	Atonic PPH	7 %
3	Puerperial pyrexia	5 %
4	Wound gaping	2 %
5	UTI	2 %

Among the neonates majority were with birth weight of 2-3 kgs (50 %) followed by more than 3 Kgs (42 %). Low birth weight neonates were 8 % of the survived. (Table 6)

Table 6: Distribution of patients according to birth weight

Sr no	Birth weight	No of patients	Percentage
1	< 2 kg	16	8 %
2	2- 3 kg	102	51 %
3	> 3 kg	82	41 %
4	Total	100	100 %

Discussion

In our sample, the majority of patients were 21-25 years of age (53%) and 26-30 years of age (28 percent). Similar results were seen in the studies of Himabindu et al[6], Eastman et al[7], where most patients (40 percent) were between the ages of 25 and 29. Second gravida (57 percent) was the majority of patients, followed by third gravid

gravid (28 percent). 11 percent were patients with gravida 4, and 4 percent were patients with 5 or above. Similar to our study, 35 percent gravid II, 30 percent gravid III status, Sethi P et al[8] also reported similar findings. In Desai et al[9], a similar result was seen. Fetal distress (19%) accompanied by mal-presentations (14%) & oligo-hydramnios was the most common sign for the caesarean section in our study (14 percent). Similarly, the most common signs for caesarean sections were fetal distress (26 percent), antepartum hemorrhage (APH, 22 percent), CPD (20 percent) & irregular presentations (17 percent) in the study by Desai et al[9]. In Jyothi H. Rao et al[10] & P, similar findings were seen. From Himabindu et al. For a total of 200 patients, 84 percent were post-operatively stable patients. Atonic PPH was the most frequently observed complication, which was observed in 7 percent of patients. Puerperal pyrexia was seen in 5% of patients. Wound gaping & urinary tract infection has been observed in 2% of patients. In our study, maternal death was not observed. This may be due to the availability of antibiotics, blood transfusion services, effective anesthesia procedures, and outstanding intra-and post-operative treatment. In Rupal S et al, similar findings were observed. Good ante-natal & intra-partum treatment & early referral will decrease multi-para maternal & peri-natal morbidity & mortality[10,11].

Conclusion

Early identification of multi-para & proper treatment complications like caesarean section can enhance maternal & fetal outcomes. A multiparous woman in labor therefore deserves the same care as primi-gravida. The primary caesarean in a multi-para setting is a responsive health delivery system predictor. For safe delivery, a multi-para who has previously delivered vaginally can still need a caesarean section. The maternal and peri-natal morbidity and occurrence of caesarean sections would be minimized by good ante-natal and intra-partum treatment and early referral. In order to explore the relationship between maternal age and maternal and fetal outcomes and the mechanisms for how advanced maternal age increases the risk of adverse birth outcomes in different subgroups of women, additional studies are required.

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