Prevalence of Primary Caesarean Section among Multigravid Women in a Tertiary Care Referral Centre – A Boon or a Catastrophe

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ABSTRACT

BACKGROUND

Caesarean section is one of the most commonly performed major surgical procedures worldwide, with an estimated 18.5 million cases performed annually. In the present-day scenario, multiparas are considered to be at increased risk for anaemia, malpresentations, haemorrhage, cephalopelvic disproportions, uterine rupture, and complications associated with chronic medical disorders like hypertension and diabetes. Some of them may land up in caesarean section owing to the associated risk factors. We wanted to study the prevalence and indications of primary caesarean section in multigravida and evaluate the maternal and foetal outcome following caesarean delivery.

METHODS

It was a cross sectional study conducted among 100 women of primary caesarean section among multigravida who had a previous normal vaginal delivery, for a period of 2 years in the Department of Obstetrics and Gynaecology at Mamata Medical College. Various indications for caesarean section were studied and maternal and perinatal outcomes were analysed.

RESULTS

The incidence of primary caesarean section in multigravida among total number of deliveries was 6% and among all caesarean sections was 14%. Among 100 multi-gravida, 32% were booked and 68% were unbooked women. Most of them were in the age group of 25 to 29 years (42%), followed by 20 to 24 years (30%). Remaining were more than 30 years old (28%). Most of them were gravida 2 (82%) followed by gravida 3 in 14% of cases. 4% of them were gravida 4. Majority of them had anaemia (38%). Medical complications like gestational diabetes were seen in 12% and pre-eclampsia was present in 14%. Recurrent pregnancy loss was found in 22%. 10% had post-dated pregnancy. Elective LSCS was done in 12% and Emergency LSCS was done in 88% of the women. Foetal distress was the indication in 28% of the women followed by severe oligohydramnios in 14% and malpresentation in 12%. There were no complications in 38% of the women and the most common post-operative complication was puerperal pyrexia 14%. Most of the babies delivered were of 3 Kg to 4 Kg birth weight (56%).

CONCLUSIONS

Many unforeseen complications like prolonged labour, obstructed labour, malpresentations can occur in parous women who had previous vaginal delivery that may require emergency caesarean section. Careful assessment of these patients during antenatal and intranatal period can improve maternal and perinatal outcome.

KEYWORDS

Multigravida, Primary Caesarean Section, Indications, Perinatal Outcome

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DOI: 10.18410/jebmh/2020/361

How to Cite This Article:
Vijayasree M, Indira T. Prevalence of primary caesarean section among multigravid women in a tertiary care referral centre a boon or a catastrophe. J Evid Based Med Healthc 2020; 7(34), 1735-1738. DOI: 10.18410/jebmh/2020/361

Submission 15-06-2020,
Peer Review 19-06-2020,
Acceptance 20-07-2020,
Published 24-08-2020.

BACKGROUND

Pregnancy, delivery and early parenthood are important life experiences that affect many families. Child delivery can occur by vaginal route or by Caesarean section. Caesarean section is defined as the birth of a foetus through incision in the abdominal wall (laparotomy) and uterine wall (hysterotomy).[1] Caesarean section is one of the most commonly performed major surgical procedure worldwide, with an estimated 18.5 million cases performed annually[2,3] with a rising trend in both developing and developed countries. In 1985, the World Health Organization indicated that national rates of caesarean delivery between 10% and 15% were considered optimal.[4] But, the Caesarean section rates varied with country level from less than 10% to more than 50%. Over the past decade, the Caesarean section rates have continued to increase and the major contribution to this are from previous LSCS and Caesarean section that were performed in Primi gravida women. A Multipara is the one who had one or more previous viable births. Grand Multiparity includes all women who have had four or more previous viable births. In the present-day scenario Multiparas are considered to be at increased risk for Anaemia, malpresentations, haemorrhage, cephalopelvic disproportions, uterine rupture and complications associated with chronic medical disorders like Hypertension and Diabetes. A false sense of security prevails in multiparous women who have had previous uneventful vaginal deliveries, but some of them may land up in caesarean section owing to the associated risk factors. So, there is a rise in overall maternal and foetal morbidity with each successive Caesarean section. The common complications encountered intraoperatively are haemorrhage, Caesarean hysterectomy, bowel and bladder injuries.[5] Postoperative complications include wound dehiscence, sepsis, fever, Urinary tract infections, increased duration of hospital stay. Foetal complications include intrauterine death, low birth weight, IUGR, birth asphyxia and neonatal jaundice.

We wanted to study the prevalence and indications of primary caesarean section in multigravida and evaluate the maternal and foetal outcome following caesarean delivery.

METHODS

It was a cross sectional study conducted on 100 women who underwent primary caesarean section among multigravida who had a previous normal vaginal delivery who crossed 28 weeks of gestation in the department of Obstetrics and Gynaecology at Mamata Medical College from January 2017 to December 2018 over a period of two years. Institutional Ethics committee clearance certificate was obtained. Informed consent was taken from all the participants in the study. Multigravida with pregnancy >37 weeks' gestation (gravida 2 and above) who have had a previous vaginal delivery of a viable neonate were included in the study. Gestational age <37 weeks, previous caesarean section, multiple pregnancy were excluded from the study. Demographic parameters, past and present obstetric history, past medical history was recorded at admission. Complete general, obstetric examination and pelvic assessment was done. Basic investigations were done, and sonography was done to estimate accurate gestational age, foetal weight, placental position and amniotic fluid index. Labour was monitored by partogram and cardiotocography. Decision for caesarean section was taken based on progression of labour, maternal and foetal condition. Intrapartum, postpartum complications, and neonatal outcome were noted.

RESULTS

The incidence of primary caesarean section in multigravida among was 6% and among all caesarean sections was 14%. Among 100 multi-gravida, 32% were Booked and 68% were unbooked women. Most of them were in the age group of 25 to 29 years (42%), followed by 20 to 24 years (30%). Remaining were more than 30 years old (28%). Most of them were gravida 2 (82%) followed by gravida 3 in 14%. 4% of them were gravida 4.

Risk Factors	No. of Women (n=100)	%
Anaemia	38	38%
Bad Obstetric history	22	22%
Pre-eclampsia	14	14%
Gestational Diabetes	12	12%
Post-dated pregnancy	10	10%
Rh Negative	04	04%
Total	100	100%

Table 1. Associated Risk Factors

Majority of them had anaemia (38%). Medical complications like Gestational diabetes was seen in 12% and pre-eclampsia was present in 14%. Recurrent pregnancy loss was found in 22% of them. 10% had post-dated pregnancy. Elective LSCS was done in 12% and Emergency LSCS was done in 88% of the women.

Indication	No. of Women	%
Foetal distress	28	28%
Severe oligohydramnios	14	14%
Malpresentation	12	12%
Cephalo pelvic disproportion	10	10%
Failed induction	8	8%
Prolonged PROM	6	6%
Placenta previa	5	5%
IUGR	4	4%
Obstructed labour	4	4%
Abnormal Doppler	4	4%
Placental abruption	3	3%
Transverse lie	2	2%
Total	100	100

Table 2. Indications for Primary Caesarean Section in Multigravida

Complications	No. of Women	%
Without complications	38	38%
Puerperal pyrexia	14	14%
Atonic PPH	12	12%
Blood transfusion	10	10%
Respiratory tract infection	8	8%
Urinary tract infection	6	6%
Traumatic PPH	6	6%
Wound infection	4	4%
Secondary suturing	2	2%
Total	100	100%

Table 3. Maternal Morbidity

Foetal Distress was the indication in 28% of the women followed by severe oligohydramnios in 14% and malpresentation in 12%. There were no complications in 38% of the women and the most common post-operative complication was puerperal pyrexia 14%. Most of the babies delivered were of 3 Kg to 4 Kg birth weight (56%). We had 2% of the babies with macrosomia i.e., more than 4 Kgs and only 4% of them were less than 2 Kgs.

NICU Admissions	No. of Women	%
Without complications	76	76%
Meconium aspiration	8	8%
Neonatal hypoglycaemia	6	6%
Birth asphyxia	4	4%
Foetal growth restriction	4	4%
Neonatal sepsis	2	2%
Total	100	100%

Table 4. NICU Admissions

Perinatal outcome: 76% babies were born with a normal Apgar score > 7 .24 babies were admitted to NICU and meconium aspiration was the commonest cause in 8% followed by neonatal hypoglycemia (6%), birth asphyxia (4%), foetal growth restriction (4%) and neonatal sepsis (2%).

DISCUSSION

Prevalence of primary caesarean section in multigravida among total number of deliveries was 6% and among all caesarean sections was 14% in our study. The percentage of Booked and Unbooked cases in the present study was 32% and 68% respectively and is comparable to the studies by Himabindhu et al[6] (booked 29%, unbooked 71%) and Sharmila et al[7] (booked 31% and unbooked 69%). The higher number of unbooked cases, the improper antenatal care they received and the associated risk factors is the reason for higher caesarean incidence in our study. In our study, most of them were in the age group of 25 to 29 years (42%), followed by 20 to 24 years (30%). Remaining were more than 30 years old (28%). Most of them were gravida 2 (82%) followed by gravida 3 in 14% .4% of them were gravida 4. Majority of them had anaemia (38%). Medical complications like Gestational diabetes was seen in 12% and pre-eclampsia was present in 14%. Recurrent pregnancy loss was found in 22% of them. 10% had post-dated pregnancy. Elective LSCS was done in 12% and Emergency LSCS was done in 88% of the women. Foetal Distress was the indication in 28% of the women followed by severe oligohydramnios in 14% and malpresentation in 12%. Among the indications for caesarean section in multigravida, most common was foetal distress (28%) which was also the most common indication in other studies.[8] The presence of foetal distress was identified by the presence of meconium stained liquor and pathological foetal heart rate tracings. We had CPD among 10% of the women. Duckman et al states that cephalopelvic disproportion in a multipara can be more significant and more dangerous than in primi because of the delay in recognition.[9] Reluctance to diagnose this cephalopelvic disproportion leads to a longer labour, with development of excessive moulding and caput formation.[10] There were no complications in 38% of the women and the most common post-operative complication was puerperal pyrexia 14%. The overall intraoperative complication rate has been reported as 12 -15%, the rate being significantly greater with emergency compared to elective caesarean sections[11,12] which is comparable to our study. Wound, urinary, and endometrial infections are relatively common complications of caesarean section, occurring in about 6.4% of women.[13] Use of antibiotic prophylaxis at the time of caesarean section reduces the incidence of puerperal sepsis.[14] Most of the babies delivered were of 3 Kg to 4 Kg birth weight (56%). We had 2% of the babies with macrosomia i.e., more than 4 Kgs and only 4% of them were less than 2 Kgs. Perinatal outcome: 76% babies were born with a normal Apgar score >7.24 babies were admitted to NICU and meconium aspiration was the commonest cause in 8% followed by neonatal hypoglycaemia (6%), birth asphyxia (4%), foetal growth restriction (4%) and neonatal sepsis (2%).

CONCLUSIONS

Many unforeseen complications like cephalopelvic disproportion, prolonged labour, obstructed labour, and malpresentations can occur in parous women who had previous vaginal delivery, that may require emergency caesarean section. Careful assessment of these patients during antenatal and intranatal period can improve maternal and perinatal outcome.

Financial or Other Competing Interests: None.

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